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# Boundaries of Patent Infringement Law

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By

Johnathon Edward Liddicoat

BSc (Hons) LLB (Hons)

Barrister and Solicitor of the Supreme Court of Victoria

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University of Tasmania

Faculty of Law

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Johnathon Edward Liddicoat

Tuesday, 26 April 2016

To the best of the author's knowledge this thesis states the law as at 21 October 2015.

### Statement of Co-Authorship

This thesis contains material co-authored with colleagues. The inclusion of co-authors reflects the fact that the work came from active collaboration between researchers and acknowledges input into team-based research. However, at all times the ideas, development and writing up of all the chapters in the thesis were the principal responsibility of the candidate, working within the Faculty of Law under the supervision of Professor Dianne Nicol, Professor Donald Chalmers and the Honourable Peter Heerey. The details of these contributions are recorded below. Due acknowledgement of these contributions is also made in the introduction to this thesis and chapters 3 and 7.

<b>Candidate</b>	Johnathon Edward Liddicoat, Faculty of Law, University of Tasmania
<b>Author 1</b>	Professor Dianne Nicol, Faculty of Law, University of Tasmania
<b>Author 2</b>	Dr Jane Nielsen, Faculty of Law, University of Tasmania

**Article 1**, 'Three Dimensions of Patent Infringement: Liability for Creation and Distribution of CAD Files' is currently in preparation for submission to a peer reviewed journal.

Located in chapter 2.

The Candidate conceived of the paper, conducted the research that formed the basis for the article, wrote the first draft and was responsible for incorporating any contributions.

Author 1 contributed critical revisions and feedback.

Author 2 contributed critical revisions and feedback.

**Article 2**, 'Re-Evaluating False Patent Marking in Australia' (2012-2013) 22(2) *Journal of Law, Information and Science* 128.

Located in chapter 6.

The Candidate conceived of the paper, conducted the research that formed the basis for the article, wrote the first draft and was responsible for incorporating any contributions.

Author 1 contributed critical revisions and feedback.

**Signed**

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Johnathon Edward Liddicoat

.....  
Professor Dianne Nicol

.....  
Dr Jane Nielsen

Tuesday, 26 April 2016

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## Abstract

In the modern global environment of rapid technological change and quickly evolving business practices, new issues frequently arise that challenge the operation of patent law. Understanding how patent law operates in this global environment is vital because the patent system plays an important role in the way new technology is developed and brought to market. The accepted rationale for the patent system is that it is an economic tool to incentivise innovation and thereby enhance social welfare. It follows, then, that if patent law handles emergent issues (or is likely to handle them) in ways that conflict with its underlying rationale, the development of new technology may be hindered.

Six diverse emergent issues that challenge the operation of patent law in Australia are examined in this thesis. They take two forms: technological, originating from development of new technology; and legal, resulting from recent case law or legislative amendment (either foreign or domestic). Technological and legal issues arise frequently and it is impossible to evaluate them all. Thus, this thesis focuses specifically on issues that are relevant to aspects of Australian patent infringement law and are amenable to doctrinal legal analysis and qualitative economic reasoning. The aspects of patent infringement law examined are: standing to initiate infringement actions; infringement by exploitation; secondary infringement; innocent infringement; and false representations about patents. In addition, to give perspective on reasoning in this study and, in some circumstances to identify solutions to defects in the law, analysis of each issue also involves a foreign comparative law component.

This study demonstrates that many of the emergent issues examined are not, or are unlikely to be, dealt with under current Australian patent law in a manner consistent with the justifications that underpin it. Accordingly, various refinements to the law are proposed to ensure the Australian patent system is kept up to date.

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## Introduction

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## I. Context

In 1904, the famous Australian poet Henry Lawson wrote an ironic poem about how young Australians were ‘born to be thinkers and doers, and makers of wonderful things’ but were consigned to ‘the pick and the shears’.<sup>1</sup> At the time, Lawson was making reference to the newly federated colony deriving income from mining and sheep farming, and relying on the rest of the world for technological innovation. It is quite clear that at the heart of Lawson’s piece was a call for domestic innovation. Coinciding with Lawson’s poem, Australia’s first federal patent legislation was assented to in 1903.<sup>2</sup> Between Lawson’s time and now, much has changed, for example, Australia’s reliance on agriculture for economic prosperity is less pronounced.<sup>3</sup> Yet, much has remained the same. For instance, Australia’s reliance on primary industries, particularly mining, has been cause for concern over the past few years.<sup>4</sup>

In 1992, Professor Sam Ricketson wrote on the past, present and future of intellectual property law reform in Australia.<sup>5</sup> Citing Lawson’s poem, Ricketson wrote of the then political desire to progress from a ‘lucky country’ which relies on good fortune for prosperity, to a ‘clever country’ or even an ‘intelligent country’, which derives prosperity through innovation.<sup>6</sup> Through no accident, Ricketson’s article approximately coincided with the enactment of Australia’s third major (and current) patents statute, the *Patents Act 1990* (Cth) (‘the *Patents Act*’).<sup>7</sup> In his article, Ricketson emphasised the importance of intellectual property laws for innovation and for modern society more generally,<sup>8</sup> and recounted the way Australian intellectual property reform had occurred from inception until writing.<sup>9</sup> Although he noted that since the 1970s the reform process had improved,<sup>10</sup> he commented that the formulation of new laws continued to be ‘haphazard’ and ‘inadequate’, particularly at the governmental level.<sup>11</sup> Ricketson concluded with recommendations for a range of government level changes to improve this.<sup>12</sup>

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<sup>1</sup> Henry Lawson, ‘Australian Engineers’ in Leonard Cronin (ed), *A Fantasy of Man: Henry Lawson Complete Works, 1901–1922* (Lansdown, 1984) 228, 228.

<sup>2</sup> *Patents Act 1903* (Cth).

<sup>3</sup> Australian Bureau of Statistic, *Australian Social Trends: Using Statistics to Paint a Picture of Australian Society* (Australian Bureau of Statistics, 2012) 2–3.

<sup>4</sup> See for eg, Christopher Kent, *Australian Economic Growth – The How, What and Where* (11 March 2015) Reserve Bank of Australia <<http://www.rba.gov.au/speeches/2015/sp-ag-2015-03-11.html>>.

<sup>5</sup> Sam Ricketson, ‘The Future of Australian Intellectual Property Law and Reform’ (1992) 3 *Australian Intellectual Property Journal* 3.

<sup>6</sup> *Ibid* 4–5.

<sup>7</sup> *Patents Act 1990* (Cth). Australia’s second piece of patent legislation, excluding amending acts, was the *Patents Act 1952* (Cth).

<sup>8</sup> Sam Ricketson, ‘The Future of Australian Intellectual Property Law and Reform’ (1992) 3 *Australian Intellectual Property Journal* 3, 5–9.

<sup>9</sup> *Ibid* 9–26.

<sup>10</sup> *Ibid* 17.

<sup>11</sup> *Ibid* 26.

<sup>12</sup> *Ibid* 26–30.

Perhaps surprisingly, Ricketson did not specifically refer to the role of academia in the law reform process. However, writing in the third volume of the newly minted *Australian Intellectual Property Journal*, he may have thought that Australian academic contributions to the development of new laws were not a weakness. Consistent with this conclusion, he praised detailed research papers that contributed to the drafting of the *Patents Act*, especially those that looked at broader economic and social issues.<sup>13</sup> Indeed, these broader perspectives are important given that patent law directly affects the way many inventions are developed and brought to market. Assuming that academic commentary continues to be valued in the law reform process,<sup>14</sup> this thesis aims to contribute to this body of work by evaluating whether, in light of emergent issues, the law operates consistently with justifications that underpin it. Secondly, where deficiencies are identified in the current operation of the law, solutions, within the context of the analysis, are provided. In this way, this thesis aims to evaluate the boundaries of current patent infringement law and, where defects are identified, recommend new ones.

The emergent issues identified in this study arise in two forms: technological and legal. The technological issues arise due to the development of new technology and the legal issues emerge due to recent case law or legislative amendment. Evaluating the operation of patent law in light of emergent issues is a vital function. If the law is not evaluated at regular intervals, there is a chance that in this age of rapid technological advancement and evolving business practices, it will become outdated and not meet the requirements of modern research and development environments.

The reference to 'patent infringement law' in the title of this study is intended to distinguish its focus from other areas of patent law. Notably, this study does not address the interpretation of claims, or laws relevant to patent validity, especially patentable subject matter, novelty, utility, inventive step and disclosure requirements; these topics have been addressed in detail elsewhere.<sup>15</sup> Rather, this thesis focuses on patent infringement law because it is only through the enforcement of patents, or the threat of enforcement, that patents are imbued with economic value;<sup>16</sup> otherwise, they are

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<sup>13</sup> Ibid 17–19.

<sup>14</sup> This is not a baseless assumption, academic scholarship is referenced throughout legislative materials that have led to Australia most significant changes to patent law in the last 10 years, for eg, Explanatory Memorandum, Intellectual Property Laws Amendment (Raising the Bar) Bill 2011, which led to *Intellectual Property Amendment Act (Raising the Bar) 2012* (Cth).

<sup>15</sup> For eg, see, Advisory Council on Intellectual Property, *Patentable Subject Matter* (December 2010); Community Affairs Reference Committee, Senate, *Gene Patents*, (2010); Legal and Constitutional Affairs Legislation Committee, Senate, *Patent Amendment (Human Genes and Biological Materials) Bill 2010* (2011); see generally volume 22(1) of the *Journal of Law, Information & Science*, and in particular reference to Australia, Dianne Nicol and John Liddicoat, 'Legislating to Exclude Gene Patents: Difficult and Unhelpful, or Useful and Feasible?' (2012) 22(1) *Journal of Law, Information and Science* 32; Charles Lawson, 'Quantum of Obviousness in Australian patent laws' (2008) 19 *Australian Intellectual Property Journal* 43; Hazel Moir, 'Empirical Evidence on Inventive Step' (2013) 35(5) *European Intellectual Property Review* 246; Hazel Moir, 'An Inventive Step for the Patent System' (2013) 35(3) *European Intellectual Property Review* 125; Charles Lawson, 'Quantum of Obviousness in Australian Patent Laws' (2008) 19 *Australian Intellectual Property Journal* 43; Hazel Moir, 'Empirical Evidence on Inventive Step' (2013) 35(5) *European Intellectual Property Review* 246; David J Brennan, 'Does a Requirement that the Description Fully Supports a Product Claim Raise Australia from "Mechanistic and Improverished" Patent Rules?' 38(1) *Monash University Law Review* 78.

<sup>16</sup> Bronwyn H Hall, 'Patents and Patent Policy' (2007) 23 *Oxford Review of Economic Policy* 568, 571.

what some authors have described as ‘rights without remedies’.<sup>17</sup> That is, if there is no right of enforcement then competitors would be able to emulate patented technology at will.

There is no one universal definition of ‘patent infringement law’ and this study uses the phrase quite broadly. For the purposes of this study, the phrase includes laws pertaining to standing (to enforce patents), infringement causes of action,<sup>18</sup> and exemptions to infringement liability. To this list, this study adds laws relating to false representations about patents, or more specifically laws prohibiting falsely marking products as patented, more commonly known as ‘false patent marking’. Its relevance to patent infringement law is that it can create the illusion of infringement by indicating to market participants that a product is protected by patent rights.<sup>19</sup>

The reference to ‘boundaries’ in the title is also used to indicate that each aspect of patent infringement law is not comprehensively reviewed. Rather, within each of the aspects of patent infringement law enumerated above (standing, infringement causes of action and others) this study identifies emergent issues that provide cause to evaluate whether the law operates consistently with the justifications that underpin it. For example, although ‘exemptions to infringement liability’ were raised as an element of patent infringement law above, this study does not address every defence or exemption to infringement, but focuses only on innocent infringement.<sup>20</sup>

Before any aspects of patent infringement law can be properly examined in light of emergent issues, the justifications for patent law must first be described. What follows is a concise account of the primary economic justifications in patent law, including the trade-offs that such justifications entail. This account is necessary because it outlines fundamental assumptions that this thesis is based upon, thereby setting broad foundations for each chapter to build on, and, in certain circumstances, extend.

## II. Background

The Director General of the World Intellectual Property Organisation in 2003, Kamal Idris, stated:

Intellectual property could be called the Cinderella of the new economy. A drab but useful servant, consigned to the dusty and uneventful offices of corporate legal departments until the princes of globalisation and technological innovation – revealing her true value – swept her to prominence and gave her an enticing new allure.<sup>21</sup>

<sup>17</sup> For a similar conclusion drawn from the perspective of ‘divided infringement’ see, Lemley et al, ‘Divided Infringement Claims’ (2005) 33 *American Intellectual Property Law Association Quarterly Journal* 255, 261.

<sup>18</sup> The nomenclature used to describe the various causes of action in this thesis are defined in this Introduction, see, pt VI.

<sup>19</sup> *Pequignot v Solo Cup*, 540 F Supp 2d 649, 654 (ED Va, 2008); Christopher G Granaghan, ‘Off the Mark: Fixing the False Marking Statute’ (2011) 89 *Texas Law Review* 477, 480–1.

<sup>20</sup> *Patents Act 1990* (Cth) s 123.

<sup>21</sup> Kamal Idris, *Intellectual Property: A Power Tool For Economic Growth* (World Intellectual Property Organisation, 2004) 24.



The significance of this comment is that intellectual property, and in particular patent law, is no longer seen as an esoteric area of law. The reason for this, as economists such as Joseph Schumpeter, Robert Solow and Paul Romer have demonstrated,<sup>22</sup> is that a significant part of economic growth is built on technological innovation. However, innovation is not only relevant to gross domestic product (or a company's profit margin) it is vital for other aspects of social welfare too. This is visibly demonstrated in the development of technologies such as telecommunication and information technology. It is also clear in the human health setting, through the production of new drugs and vaccines that allow people to live longer, healthier lives. In this context then, it is not surprising that Australia's patent regime is justified on economic grounds as a general welfare enhancing tool.<sup>23</sup>

The primary economic justification for patent law is that inventions are desirable public goods, but if creation of them is not incentivised, expenditure of resources in them may occur at a sub-optimal rate.<sup>24</sup> The reason sub-optimal investment may occur is due to the nature of inventions, which, at their heart, are applications of ideas or information.<sup>25</sup> The properties of information that contribute to this problem are that information is 'non-rival', which means that use by one person does not diminish the opportunities for use by others, and it is 'non-excludable', which means that (in the absence of patent law) people cannot prohibit others from using it.<sup>26</sup> It follows, then, that once an invention is revealed in a competitive market, other parties can usually understand how the invention works, emulate it, and sell it at a cheaper price than the inventor because they do not have to seek returns for the original expenditure in research and development.<sup>27</sup> This mechanism of

<sup>22</sup> For example, see, Joseph A Schumpeter, *The Theory of Economic Development* (Harvard University Press, 1934); Robert M Solow, 'Technical Change and the Aggregate Production Function' (1957) 39 *The Review of Economics and Statistics* 312; Paul M Romer, 'Increasing Returns and Long Run Growth' (1986) 95 *Journal of Political Economics* 1002; Charles I Jones and John C Williams, 'Measuring the Social Return to R&D' (1998) 113 *Quarterly Journal of Economics* 1119; William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 327. For a discussion on endogenous and exogenous growth theories and their role in innovation see, Idris, *Intellectual Property: A Power Tool for Economic Growth* (World Intellectual Property Organisation, 2004) 25–31.

<sup>23</sup> Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 11–4; Intellectual Property and Competition Review Committee, *Review of Intellectual Property Legislation Under the Competition Principles Agreement Final Report* (IP Australia, Phillip, 2000) 22–4; Commonwealth, *Parliamentary Debates*, Senate, 29 May 1990, 1271 (Robert Ray); Commonwealth, *Parliamentary Debates*, House of Representatives, 10 October 1990, 2565 (Simon Crean); Productivity Commission, *Compulsory licensing of patents* (2013) <<http://www.pc.gov.au/projects/inquiry/patents>> 35–6; *JTI International SA v Commonwealth of Australia* (2012) 250 CLR 1, 30 (French J).

<sup>24</sup> William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 327; Merges, Menell and Lemley, *Intellectual Property in the New Technological Age* (Aspen Publishers, 6<sup>th</sup> ed, 2012) 12–3.

<sup>25</sup> *Merrell Dow Pharmaceuticals Inc v H N Norton & Co Ltd* [1996] RPC 76, 79–80 (Lord Hoffman); *Azuko Pty Ltd v Old Digger Pty Ltd* (2001) 52 IPR 72, 120 (Heerey J); Ann Monotti, 'To Make an Article for Ultimate Sale: the Secret Use Provision in the Patents Act 1990 (Cth)' (2005) 27(12) *European Intellectual Property Review* 446, 450.

<sup>26</sup> Productivity Commission, *Compulsory Licensing of Patents*, Report No 61 (2013) <<http://www.pc.gov.au/projects/inquiry/patents>> 36.

<sup>27</sup> Merges, Menell and Lemley, *Intellectual Property in the New Technological Age* (Aspen Publishers, 6<sup>th</sup> ed, 2012) 12–13; Intellectual Property and Competition Review Committee, *Review of Intellectual Property Legislation Under the Competition Principles Agreement Final Report* (IP Australia, Phillip, 2000) 22–4; Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 11–4; Kenneth W Dam, 'The Economic Underpinnings of Patent Law' (1994) 23 *Journal of Legal Studies* 247, 247–9; Arnold Plant, 'The Economic Theory Concerning Patents for Inventions' (1934) 1 *Economica* 30, 32.

copying inventions by competitors is commonly known as 'free-riding'.<sup>28</sup> Patent law is said to 'incentivise' innovative activity by creating exclusive rights in inventions that prevent free riding for a 20 year period and allow patentees to make a profit.<sup>29</sup>

Beyond the 'incentive' nature of patents, there are a number of other factors that contribute to the efficiency of the patent system. One particularly important feature is that, although patent rights exist as the exception to a competitive market economy that, as a general rule, permits copying and imitation,<sup>30</sup> they do not exempt inventions from other market forces. Indeed, a significant part of the economic utility of patents is owed to the fact that they operate like other pieces of property upon which market forces operate.<sup>31</sup> Perhaps most critically, the grant of a patent does not mean a patentee becomes a monopolist in an entire market, but only in the specific technological invention that is described in their patent.<sup>32</sup> The significance of this is that patentees' products often compete with other substitutable products in a market. For example, a hypothetical new (patented) painkiller must compete with generic aspirin and ibuprofen. In the broader scheme of a large market, this means both that patentees often do not exercise monopoly power, and that they are susceptible to general market forces such as other innovative entrants and price competition.<sup>33</sup>

Related to the notion that patents prevent free-riding, is the justification that patents create 'prospects' to be exploited.<sup>34</sup> The idea here is that patents create rights in innovative technology, but the technology to which they pertain often requires further development before it can be sold in a market product. However, this justification for patents is more complex than simply awarding patentees a right by which additional resources spent on commercialising an invention can be recouped.<sup>35</sup> It continues that, through the patenting process, defined rights in inventions are efficiently allocated to people who have expertise in that technology, who then, operating as market participants, will choose an efficient method to bring products to market.<sup>36</sup> Complementary to this

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<sup>28</sup> See, eg, Intellectual Property and Competition Review Committee, *Review of Intellectual Property Legislation Under the Competition Principles Agreement Final Report* (IP Australia, Phillip, 2000) 23.

<sup>29</sup> *Patents Act 1990* (Cth) s 67; Merges, Menell and Lemley, *Intellectual Property in the New Technological Age* (Aspen Publishers, 6<sup>th</sup> ed, 2012) 12–13; Intellectual Property and Competition Review Committee, *Review of Intellectual Property Legislation Under the Competition Principles Agreement Final Report* (IP Australia, Phillip, 2000) 22–4; Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 11–4; Kenneth W Dam, 'The Economic Underpinnings of Patent Law (1994) 23 *Journal of Legal Studies* 247, 249; Arnold Plant, 'The Economic Theory Concerning Patents for Inventions (1934) 1 *Economica* 30, 32; *contra* Kenneth J Arrow, 'Economic Welfare and the Allocation of Resources for Invention' in National Bureau of Economic Research (eds), *The Rate and Direction of Inventive Activity: Economic and Social Factors* (1962) 609.

<sup>30</sup> William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 9; Gans et al, *Principles of Economics* (Thompson, 2<sup>nd</sup> ed, 2003) 22–3.

<sup>31</sup> See generally, Kenneth W Dam, 'The Economic Underpinnings of Patent Law (1994) 23 *Journal of Legal Studies* 247.

<sup>32</sup> *Ibid* 249–51; see also, Thomas F Cotter, 'Is This Conflict Really Necessary?: Resolving an Ostensible Conflict Between Patent Law and Federal Trademark Law' (1999) 3 *Marquette Intellectual Property Law Review* 25, 28–34.

<sup>33</sup> Kenneth W Dam, 'The Economic Underpinnings of Patent Law (1994) 23 *Journal of Legal Studies* 247, 249–51.

<sup>34</sup> See generally, Edmund W Kitch, 'The Nature and Function of the Patent System' (1977) 20 *Journal of Law and Economics* 265.

<sup>35</sup> *Ibid* 276–7.

<sup>36</sup> *Ibid* 266.

efficient allocation of resources, an important aspect of the processes by which patented inventions may be brought to market is that patentees often do not have all the necessary skills to do this.<sup>37</sup> Thus, in a division of labour, patentees often transfer their patent rights to parties that have complementary expertise.<sup>38</sup> In this way, patents create prospective rights that can be exploited,<sup>39</sup> and create relatively well defined 'modules' that enable this through trade with other parties.<sup>40</sup>

This brief examination of the primary positive economic effects of patents is incomplete without referring to their disclosure function.<sup>41</sup> Although this thesis will not address the law relating to disclosure in detail, it is important to note its function.<sup>42</sup> At its most basic the disclosure element of patent law satisfies the fundamental public good of information by disclosing how an invention works. However, it also serves several more specific economic outcomes. Notably, by informing third parties how the invention works, it can prevent duplicative efforts in creating inventions, can enable third parties to copy the invention when patent protection ends, and can enable parties to 'invent around' an invention when a patent is on foot.<sup>43</sup> Although some commentators consider the disclosure element of patent law to be a secondary justification,<sup>44</sup> Professors Landes and Posner argue that it should not be underestimated, especially when it is compared to a competitive market without patent law.<sup>45</sup> The authors stress that without patent protection, firms would spend more resources maintaining secrecy, and that this in turn would prevent inventors from licensing-out technology that could improve other parties' operations, or prevent other parties from finding new applications for the technology.<sup>46</sup> They also suggest that without patents, it would be easier for large companies with economies of scale to dominate certain markets because through patented

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<sup>37</sup> Ibid 277–8.

<sup>38</sup> Ibid; For an exploration in the Australian drug discovery and development sector see, Nicol et al, *The Innovation Pool in Biotechnology: The Role of Patents in Facilitating Innovation* (Occasional Paper No 8, Centre for Law and Genetics, 2014) 48, 49–50, 57–65, 76–80, 84–6, 87–9 <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2503314](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2503314)>.

<sup>39</sup> *Patents Act 1990* (Cth) s 13(2).

<sup>40</sup> Edmund W Kitch, 'The Nature and Function of the Patent System' (1977) 20 *Journal of Law and Economics* 265, 277–9; Henry E Smith, 'Intellectual Property as Property: Delineating Entitlements in Information' (2007) 116 *Yale Law Journal* 1742, 1747–8, 1756–66.

<sup>41</sup> For other positive economic effects that patents entail, see, Clarisa Long, 'Patent Signals' (2002) 69 *The University of Chicago Law Review* 625; F Scott Kieff and Troy A Pardedes, 'Engineering a Deal: Toward a Private Ordering Solution to the Anticommons Problem' (2007) 48 *British Columbia Law Review* 11; Henry E Smith, 'Intellectual Property as Property: Delineating Entitlements in Information' (2007) 116 *Yale Law Journal* 1742; Mark A Lemley, 'The Myth of the Sole Inventor' (2012) 110 *Michigan Law Review* 709.

<sup>42</sup> *Patents Act 1990* (Cth) s 40(2)(a); *Pfizer Overseas Pharmaceuticals v Eli Lilly & Co* (2005) 225 ALR 416, 484–95; Explanatory Memorandum, Intellectual Property Laws Amendment (Raising the Bar) Bill 2011, 46–8.

<sup>43</sup> William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 302; Edmund W Kitch, 'The Nature and Function of the Patent System' (1977) 20 *Journal of Law and Economics* 265, 276.

<sup>44</sup> See, eg, Alan Devlin, 'The Misunderstood Function of Disclosure in Patent Law' (2010) 23(2) *Harvard Journal of Law & Technology* 401; Mark A Lemley, 'The Myth of the Sole Inventor' (2012) 110 *Michigan Law Review* 709, 745–9.

<sup>45</sup> William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 326–33.

<sup>46</sup> Ibid 328–29.

inventions (that prevent larger firms from free-riding) it is easier for smaller, emerging firms to compete.<sup>47</sup>

Before discussing how these positive aspects of patents are traded-off against some negative aspects, three further points must be made. First, numerous other theories exist to justify patent law. These range from Locke's labour theory<sup>48</sup> to Hegel's Philosophy of Right,<sup>49</sup> and beyond.<sup>50</sup> It is quite likely that these justifications, or others, will continue to develop and perhaps grow in influence. However, as stated at the outset, the primary rationale for Australian patent law is currently economic.<sup>51</sup>

Second, whilst few would argue against the importance of innovation and technology in society, whether patents do in fact incentivise innovation is not clear.<sup>52</sup> In the words of Idris, '[c]urrent data regarding the importance of IP in economic development is still limited'.<sup>53</sup> Notably, there is no doubt that innovation occurs without patents;<sup>54</sup> for example many advances in computer software in the early 1980s were not patented,<sup>55</sup> and one study in computer software indicates that patents may actually retard development.<sup>56</sup> More broadly, various studies regarding the economic effects of patents, both in Australia and elsewhere, have shown that their economic utility is questionable,<sup>57</sup> and may be limited to certain industries, such as pharmaceuticals<sup>58</sup> because, amongst other things, it

<sup>47</sup> Ibid 330; see also, Ashish Arora and Robert P Merges, 'Specialized Supply Firms, Property Rights and Firm Boundaries' (2004) 13 *Industrial and Corporate Change* 451, 471–2.

<sup>48</sup> See generally, John Locke, *Second Treatise of Government* (Hackett Publishing Company, first published in 1680, 1980 ed) ch 5; discussed in Robert P Merges, *Justifying Intellectual Property* (Harvard University Press, 2011) 14–5, 34–48.

<sup>49</sup> See generally, Georg Wilhelm Friedrich Hegel, *Elements of the Philosophy of Right* (H B Nisbet, Cambridge University Press, 8<sup>th</sup> ed, 2003) [trans of: *Grundlinien der Philosophie des Rechts* (first published 1821)]; discussed in Peter Drahos, *A Philosophy of Intellectual Property* (Ashgate Publishing, 1996) 74–82, 88.

<sup>50</sup> See, eg, Robert P Merges, *Justifying Intellectual Property* (Harvard University Press, 2011); Peter Drahos, *A Philosophy of Intellectual Property* (Ashgate Publishing, 1996); William Fisher, 'Theories of Intellectual Property' in Stephen R Munzer (ed), *New Essays in the Legal and Political Theory of Property* (Cambridge University Press, 2001).

<sup>51</sup> Commonwealth, *Parliamentary Debates*, Senate, 29 May 1990, 1271 (Robert Ray); Commonwealth, *Parliamentary Debates*, House of Representatives, 10 October 1990, 2565 (Simon Crean).

<sup>52</sup> The related point of whether patents increase social welfare is considered below.

<sup>53</sup> Kamal Idris, *Intellectual Property: A Power Tool For Economic Growth* (World Intellectual Property Organisation, 2004) 37; see also, William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 326–7.

<sup>54</sup> See for eg, Michele Boldrin and David K Levine, *Against Intellectual Monopoly* (Cambridge University Press, 2008) 42–57.

<sup>55</sup> Ibid 15–22.

<sup>56</sup> See generally, James Bessen and Eric Maskin, 'Sequential Innovation, Patents, and Imitation' (2009) 40(4) *RAND Journal of Economics* 611, 628.

<sup>57</sup> For a review, see, Bronwyn H Hall, 'Patents and Patent Policy' (2007) 23 *Oxford Review of Economic Policy* 568, 572–5. See also, Edith Penrose, *The Economics of the International Patent System* (Johns Hopkins Press, 1951); Fritz Machlup, *An Economic Review of the Patent System* (Study no 15 of the Subcommittee on Patents, Trademarks, and Copyrights of the Committee on the Judiciary, United States Government Printing Office, 1958); James Bessen and Michael J Meurer, *Patent Failure* (Princeton University Press, 2008) chs 4–6; Walter G Park and Juan Carlos Ginarte, 'Intellectual Property Rights and Economic Growth' (1997) 15 *Contemporary Economic Policy* 51, 60; Arora et al, 'R&D and the Patent Premium' (2003) NBER (Working Paper 9431, The National Bureau of Economic Research, November 2004) 35–6 *contra* Keith E Maskus, *Intellectual Property Rights in the Global Economy* (Institute for International Economics, 2000) chs 4–5. For Australia see, T D Mandeville, D M Lamberton and E J Bishop, *Economic Effects of the Australian Patent* (Report to the Industrial Property Advisory Committee, Australian Government Publishing Service, 1982).

<sup>58</sup> Levin et al, 'Appropriating the Return from Industrial Research and Development' (1987) 3 *Brookings Papers on Economic Activity* 783, 797.

raises the cost of imitation.<sup>59</sup> In Australia, the government sponsored economic analysis of patent law that was conducted prior to the drafting of the *Patents Act*, ‘*Report on the Economics Effects of the Australian Patent System*’,<sup>60</sup> considered that the ‘economic benefits of the patent system to the innovative process in Australia are not only small, but extremely subtle.’<sup>61</sup> Nevertheless, as Idris has stated, ‘[i]t is difficult to analyse the role of IP in the economic development process because of complexities in separating or disaggregating the effects of IP protection from other factors’.<sup>62</sup>

Idris’ statement on IP and its effects on economic development leads to the third point that must be made. The economists Professor Peter Carroll and Eduardo Pol outline five broad factors that influence innovation. These include:

1. political environment;
2. general economic framework;
3. legal framework;
4. technology distribution power; and
5. other incentive regimes.<sup>63</sup>

The ways in which these factors can, and do, interact is diverse, particularly when it is considered that within these factors are tax, education, finance, political stability, research subsidies and culture. For example, it is difficult for innovation to occur without an educated population, access to underlying technology, or funding. However, it is not just these wider economic and social factors that influence how innovation occurs. Various aspects of patent law — which come within Carroll and Pol’s ‘legal framework’ — can operate to prohibit or slow innovation. Important aspects of patent law that can negatively affect innovation are elaborated upon below, with a focus on those relevant to the emergent issues that will be discussed in this study.

Generally speaking, market economies such as Australia’s rely on competition to lower prices, increase variety, increase socially valued items, and generally enhance social welfare.<sup>64</sup> However,

<sup>59</sup> Ibid 811; see also, Mansfield et al, ‘Imitation Costs and Patents: An Empirical Study (1981) 91 *The Economic Journal* 907, 913–4; Arora et al, ‘R&D and the Patent Premium’ (2003) NBER (Working Paper 9431, The National Bureau of Economic Research, November 2004) 35–6; cf Yi Qian, ‘Do Additional National Patent Laws Stimulate Domestic Innovation in a Global Patenting Environment’ (2007) 89(3) *Review of Economics and Statistics* 436, 450.

<sup>60</sup> T D Mandeville, D M Lamberton and E J Bishop, *Economic Effects of the Australian Patent* (Report to the Industrial Property Advisory Committee, Australian Government Publishing Service, 1982).

<sup>61</sup> Ibid 211.

<sup>62</sup> Kamal Idris, *Intellectual Property: A Power Tool For Economic Growth* (World Intellectual Property Organisation, 2004) 37; see also, Keith E Maskus, *Intellectual Property Rights in the Global Economy* (Institute for International Economics, 2000) 44; William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 9, 310–26; Bronwyn H Hall, ‘Patents and Patent Policy’ (2007) 23 *Oxford Review of Economic Policy* 568, 573–4; D Mandeville, D M Lamberton and E J Bishop, *Economic Effects of the Australian Patent* (Report to the Industrial Property Advisory Committee, Australian Government Publishing Service, 1982) 214.

<sup>63</sup> Eduardo Pol and Peter Carroll, *An Introduction to the Creative Economy* (Innovation Planet, 2005) 52.

<sup>64</sup> Economic Planning Advisory Council, *Promoting Competition in Australia* (1989) 5–10; Philip L Williams, ‘Why Regulate for Competition?’ in Michael James (eds), *Regulating for Competition?* (Centre for Independent Studies, 1989) 13–18.

patent rights create 20 year barriers<sup>65</sup> (subject to extension in some circumstances<sup>66</sup>) to commercial applications of inventions beyond those that patentees permit. Such barriers may occur when patentees charge high prices for licences, choose not to exploit an invention, or choose not to authorise others to exploit an invention. Of course, barriers such as these are intrinsic to the incentive nature of exclusive rights. But, in certain contexts, they may be quite problematic. For example, if an invention would be realised in a similar time period without the patent incentive, then the cost to society in awarding a patent may exceed any benefit the patent confers.<sup>67</sup> In addition, if a product is the only solution to a technical issue, for example, a test or treatment for a particular disease, then the high cost or restricted access may mean people's health is put at risk.<sup>68</sup> More broadly, in cumulative industries such as software where products are often characterised by low cost, rapid, incremental improvements, and short lifecycles, 20 year patent barriers can be problematic for follow-on innovation.<sup>69</sup>

However, it is more than just the exclusive rights of individual patents that may negatively affect innovation. At any one point in time, millions of granted patents may be on foot in some jurisdictions, with hundreds of thousands more awaiting examination.<sup>70</sup> Reading one patent and identifying exactly what it means is time consuming and often requires legal and scientific expertise, which means that searching through a large volume of patents can be particularly difficult and resource expensive. Moreover, when determining patent infringement, these costs can be exacerbated by analysis of associated legal tests for patent validity and infringement which can be difficult to apply. It is a classic legal conundrum that human language will lead to linguistic uncertainty,<sup>71</sup> and in patent scenarios, whether a patent exists, combined with patent claim language and tests for infringement means there can be significant uncertainty in the perimeters of patent rights.<sup>72</sup> If it is too resource expensive to search patent databases and analyse what they mean, parties who would otherwise be willing to conduct a freedom-to-operate analysis to establish that their new product is not infringing a patent (or to obtain a licence if it does) may choose not to do

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<sup>65</sup> *Patents Act 1990* (Cth) s 67.

<sup>66</sup> *Ibid* ch 6 pt 3.

<sup>67</sup> Mark A Lemley, 'The Myth of the Sole Inventor' (2012) 110 *Michigan Law Review* 709, 712–38; for a brief comment on the interaction between market power and competition law, see, Peter Heerey and Nicole Malone, 'RPM for RPM: National Phonograph Company of Australia v Menck' in Andrew T Keyon, Megan Richardson and Sam Ricketson (eds), *Landmarks in Australian Intellectual Property Law* (Cambridge University Press, 2009) 52.

<sup>68</sup> Global Commission on HIV and the Law, *Risks, Rights and Health* (United Nations Development Programme, July 2012) ch 6.

<sup>69</sup> Dan L Burk and Mark A Lemley, *Policy Levers in Patent Law* (2003) 89(7) *Virginia Law Review* 1575, 1619–24.

<sup>70</sup> World Intellectual Property Office, *World Intellectual Property Indicators* (WIPO Economic and Statistics Series, 2013) 43–87.

<sup>71</sup> H L A Hart, *The Concept of Law* (Oxford University Press, 2<sup>nd</sup>, 1994) 124–36.

<sup>72</sup> *Ibid*; Mark D Janis and Timothy R Holbrook, 'Patent Law's Audience' (2012) 97 *Minnesota Law Review* 72; Tun-Jen Chiang and Lawrence B Solum, 'The Interpretation-Construction Distinction in Patent Law' (2013) 123 *Yale Law Journal* 530; Sir Robin Jacob, 'Is Intellectual Property the Grit in the Wheels of Industry?' (Speech delivered at the Gray's Inn Reading, Gresham College, 25 June 2002).

so.<sup>73</sup> Alternatively, a freedom-to-operate analysis may be completed and incorrectly conclude that a new product is not infringing.<sup>74</sup> In turn, either of these situations can lead to patent litigation, where parties are unsure whether they have infringed or not. Indeed, in the US, billions of dollars are directed to litigating patents each year.<sup>75</sup> In this context, Professor Michael Meurer and James Bessen argue that this expense mitigates against the positive economic effects that patents may have because it means parties must continually expend significant resources identifying what the perimeters of patents actually are.<sup>76</sup>

Large volumes of patents can also be a problem for parties that are developing new products in another respect. If a new product builds on patented technology, then the production and sale of it may infringe one or more patents. Accordingly, to avoid infringement, parties producing new products may need to seek licences (or ownership) from various patentees. In industries such as biotechnology, that may require a number of patent licences, this is problematic because bargaining breakdowns may mean the new product cannot be developed.<sup>77</sup> This situation could arise through one patentee asking a price that is too high, or licence terms that are too restrictive.<sup>78</sup> It could also arise through an accumulation of licences with different parties which together mean the price is too high or terms too restrictive.<sup>79</sup> Such outcomes are known as an ‘anti-commons effect’ and put follow-on innovation at risk.<sup>80</sup>

Closely related to the idea of the anti-commons is that of ‘patent thickets’. These arise due to vast numbers of patents that are granted on similar or related technology with potentially overlapping claims.<sup>81</sup> Patent thickets can slow or redirect innovation to other areas because it may be too costly to clear thickets by investing resources to conduct freedom-to-operate analyses and negotiate the right licences. Alternatively, the thicket may be too dense for any analysis to conclusively identify how many patents need to be licensed.<sup>82</sup>

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<sup>73</sup> Michael Meurer, ‘Patent Notice and Cumulative Innovation’ in Manne GA and Wright JD (eds), *Competition Policy and Patent Law under Uncertainty* (Cambridge, 2011) 332. The brief review of companies undertaking patent clearance assessments here does not specifically say that companies do not undertake them because they are too expensive. Rather, it is implicit that if they could be achieved, quickly, easily and cheaply, and that they were reliable, than more firms would undertake them to ensure they are not infringing patents.

<sup>74</sup> See, *Global-Tech Appliances Inc v SEB SA*, 131 S Ct 2060, 2071 (2011).

<sup>75</sup> James Bessen and Michael J Meurer, *Patent Failure* (Princeton University Press, 2008) ch 6.

<sup>76</sup> Ibid 64–8, ch 4.

<sup>77</sup> Dan L Burk and Mark A Lemley, ‘Policy Levers in Patent Law’ (2003) 89(7) *Virginia Law Review* 1575, 1624–1627.

<sup>78</sup> Ibid.

<sup>79</sup> Michael A Heller and Rebecca S Eisenberg, ‘Can Patents Deter Innovation? The Anticommons in Biomedical Research’ (1998) 280 *Science* 698, 699.

<sup>80</sup> See generally, *ibid*.

<sup>81</sup> Carl Shapiro ‘Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting’ in A Jaffe, J Lerner, S Stern (eds), *Innovation Policy and the Economy* (MIT Press, 2001) 119–26; Dan L Burk and Mark A Lemley, *Policy Levers in Patent Law* (2003) 89(7) *Virginia Law Review* 1575, 1614–5.

<sup>82</sup> Carl Shapiro ‘Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting’ in A Jaffe, J Lerner, S Stern (eds), *Innovation Policy and the Economy* (MIT Press, 2001) 126–29; see also, Nicol et al, *The Innovation Pool in Biotechnology: The Role of Patents in Facilitating Innovation* (Occasional Paper No 8, Centre for Law and Genetics, 2014) 89–92 <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2503314](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2503314)>.

There are three further negative aspects of patents that are not central to this study, but will be outlined for completeness. One issue is that, due to the cost of litigation, parties can sometimes strategically use patents to extract licence fees from alleged infringers when a cost-benefit analysis favours settlement over litigating validity and infringement.<sup>83</sup> Second, a related phenomenon has also occurred, predominantly in the US, where firms acquire patents with no intention of producing products, and extract licence fees or financial relief in litigation that are in excess of the contribution the invention has made to society – this is commonly known as ‘patent trolling’.<sup>84</sup> Third, if litigation is common in an area of research and development, the threat of litigation may discourage firms from entering such areas, or, if they have entered, cause them to adjust research interests.<sup>85</sup>

The justifications and trade-offs for patent law outlined above, lay the ground work for further analysis in this thesis. This brief discussion also forms important background information on whether patents actually achieve their aim of enhancing innovation and enhancing social welfare. On this point, some commentators argue that patent regimes worldwide should be abolished.<sup>86</sup> This position is taken primarily on the basis that overall, patent systems do not incentivise innovation and that the net social effects of patents are actually welfare-reducing.<sup>87</sup> In the Australian context, the *Report on the Economics Effects of the Australian Patent System* concluded that the ‘benefit/cost ratio of the patent system in Australia is negative, or at the very best, in balance.’<sup>88</sup> Despite this, as various other economists have pointed out, whether innovation is enhanced and whether social welfare is enhanced are questions that have yet to be conclusively answered and perhaps cannot be.<sup>89</sup> Moreover, abolishing the patent system carries its own costs. On this point, Professor Bronwyn Hall comments that ‘industrial organisation and firms adapt to the institutional regime in which they operate and changing this regime, whatever it is, involves substantial short-term costs that may not be outweighed by the long-term benefits.’<sup>90</sup> It is interesting to note that the Australian government has recently requested that the Australian Productivity Commission review Australia’s intellectual property systems. The terms of reference for this review are quite broad, they include assessing whether appropriate ‘incentives for innovation, investment and the production of creative works exist’, and ensuring that they ‘do not unreasonably impede further innovation, competition,

<sup>83</sup> Bronwyn H Hall, ‘Patents and Patent Policy’ (2007) 23 *Oxford Review of Economic Policy* 568, 571.

<sup>84</sup> James Bessen and Michael J Meurer, ‘The Direct Costs from NPE Disputes’ (Boston University School of Law Working Paper No. 12-34, 28 June 2012) 24–5.

<sup>85</sup> See, Josh Lerner, ‘Patenting in the Shadow of Competitors’ (1995) 38(2) *Journal of Law and Economics* 463.

<sup>86</sup> See eg, Michele Boldrin and David K Levine, *Against Intellectual Monopoly* (Cambridge University Press, 2008) 6–7.

<sup>87</sup> *Ibid* 10–11.

<sup>88</sup> T D Mandeville, D M Lamberton and E J Bishop, *Economic Effects of the Australian Patent* (Report to the Industrial Property Advisory Committee, Australian Government Publishing Service, 1982) 213.

<sup>89</sup> Kamal Idris, *Intellectual Property: A Power Tool For Economic Growth* (World Intellectual Property Organisation, 2004) 37; see also, William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 326–7; Bronwyn H Hall, ‘Patents and Patent Policy’ (2007) 23 *Oxford Review of Economic Policy* 568, 575, 583.

<sup>90</sup> Bronwyn H Hall, ‘Patents and Patent Policy’ (2007) 23 *Oxford Review of Economic Policy* 568, 575, 575.



investment and access to goods and services.<sup>91</sup> Thus, in the absence of this review, or any other other research, debunking the economic justifications for the patent system, or the creation of a better alternative, this thesis operates under the assumption that the economic rationales for patents are justified and aims to ensure Australia's patent laws reflect them. Indeed, as this thesis points out, in some instances it is possible to enhance the positive effects of patents and minimise the negative ones.

### III. Overview of this Study & Methodology

As outlined above, this study narrows its focus to emergent issues relevant to patent infringement law. Beyond this narrowing, there are two further methodological matters that must be mentioned. The first relates to the identification of emergent technological and legal issues, and the second to the process of analysis adopted in each chapter. On the emergent technological and legal issues, the method of selecting these issues was based on two criteria. Each must have been:

- amenable to doctrinal legal analysis and qualitative economic-based reasoning; and
- open to the formulation of a plausible and desirable solution, if examination of the emergent issue warrants a change in the law.

There is little doubt that additional emergent technological and legal issues to the ones addressed in this thesis could be identified using these criteria. However, this study is not intended to be exhaustive in this sense, but to continue scholarly commentary analysing whether the law handles emergent issues consistent with its underpinnings. Moreover, although there are many emergent legal and technological issues, not all lend themselves to doctrinal legal analysis and qualitative economic-based reasoning. For example, there is ongoing debate about whether exemptions to infringement should extend to not-for-profit uses of inventions in some circumstances, or to use in human genetic diagnostic services.<sup>92</sup> However, how and when these exemptions are warranted, and whether they would improve the use of the invention without eroding the incentive to invent it, are not clear without more data. Similarly, whether these issues would be best resolved using legal mechanisms such as Crown Use<sup>93</sup> or compulsory licences<sup>94</sup> are not clear either.

With regard to the methodology, the approach throughout this thesis is almost exclusively qualitative. An exception to this is in chapter 7 where a quantitative assessment of law suits in the US is undertaken to examine the provision in the *Patents Act* prohibiting false patent marking (the

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<sup>91</sup> *Intellectual Property Arrangements* (18 August 2015) Productivity Commission <<http://www.pc.gov.au/inquiries/current/intellectual-property/terms-of-reference>>.

<sup>92</sup> Nicol et al, *The Innovation Pool in Biotechnology: The Role of Patents in Facilitating Innovation* (Occasional Paper No 8, Centre for Law and Genetics, 2014) 181 <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2503314](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2503314)>; US Secretary's Advisory Committee on Genetics, Health and Society, *Gene Patents and Licensing Practices and their Impact on Patient Access to Genetic Tests* (2010) Washington DC, 87, 97.

<sup>93</sup> *Patents Act 1990* (Cth) ch 17.

<sup>94</sup> *Ibid* ch 12.

methodology of collecting and analysing these data is included in the chapter). More generally, each chapter includes a close doctrinal analysis of an emergent issue in combination with consideration of relevant underpinning economic rationales (and trade-offs) for patent law. Pursuant to both the economic and legal perspectives, each chapter also involves a foreign comparative law component. Depending on the context of the analysis, this comparative law component gives perspective on the reasoning within each topic and, in some circumstances, is used to identify solutions to any deficiencies in the law that the analysis may expose. Indeed, in the context of patent law, comparative law forms an economic perspective itself because harmonisation of patent laws is pursued to increase the efficiency of the global patent system.<sup>95</sup> The next section of this introduction outlines the main methodological features of each chapter in greater detail and introduces the emergent issues.

Chapter 1 analyses standing to initiate patent infringement actions under s 120(1) of the *Patents Act*. This provision permits patentees and exclusive licensees to initiate infringement actions. However, recent Australian case law has highlighted an issue with the definition of ‘exclusive licensee’. More specifically, litigants have queried whether an ‘exclusive licensee’ is only constituted by a party who controls the full complement of rights conferred in a patent, or whether it also includes a licensee who receives exclusivity to a partitioned sphere of rights within a patent. This is important because if licensees who exclusively control partitioned elements of patent rights, such as the ability to exploit an invention in a geographic area, cannot initiate infringement actions, the economic value of a patent may be eroded. This in turn may negatively affect the utility of patents as assets or ‘prospects’ to be exploited by exclusive licensees. This chapter compares the current operation of the provision to the economic justifications for patent law as they apply to standing, with particular emphasis placed on the use of patents in market economies. This chapter also contrasts the operation of the Australian provision against its equivalents in the US and UK. Based on these insights, in particular the economic reasoning, recommendations are made to reform the provision.

Chapters 2 to 5 explore the boundaries of specific infringement causes of action. As explained in detail below, infringement actions can be grouped into two categories: infringement by exploitation; and secondary infringement.<sup>96</sup> Chapter 2 explores the boundaries of these causes of action in the context of 3D printers. 3D printers are a relatively new technology that allows users to print tangible objects from digital computer files. This ‘printing’ process is broadly analogous to the way an inkjet printer reproduces text on paper from digital computer files. The primary enquiry in this chapter is whether the creation or distribution of files that can instruct 3D printers to create tangible objects

<sup>95</sup> B+ Sub-Group, ‘Objectives and Principles, with Commentary on Potential Outcomes’ (Group B+ Sub-Group on Patent Harmonisation, 27 May 2015) 2; Jeremy Phillips, *Harmonious Global Patent Harmonisation? B+ Subgroup Asks for Comments* (17 June 2015) IPKat <<http://ipkitten.blogspot.com.au/2015/06/harmonious-global-patent-harmonisation.html>>; Bronwyn H Hall, ‘Patents and Patent Policy’ (2007) 23 *Oxford Review of Economic Policy* 568, 569.

<sup>96</sup> The specific terminology used in this thesis is explained in pt V of this Introduction.

may constitute infringement of patents that claim the objects printed. This is a key issue because as 3D printing technology develops, the ability for people to easily share files that are capable of instructing a 3D printer to print tangible objects may lead to wide scale infringement of objects that are protected by patent rights. In turn, this infringement may mean that the economic value of certain patents is diminished. As this analysis demonstrates, at the heart of this issue is whether patent infringement law should be extended to protect more abstract features of information than it currently does. Infringement liability for distributing these files in Australia is also compared to the position in the US. In all, this approach permits an evaluation of whether Australian infringement actions balance the economic interests of patentees, with the interests of third parties to use information without specifically re-creating patented inventions.

Chapter 3 investigates a contentious element of secondary infringement law that arises when two parties, who are in an arm's-length relationship, jointly perform all the steps in a method patent – this has become known as 'divided performance'. This issue has recently come to light due to a series of US cases. Controversially, the US Federal Circuit found liability in these circumstances under a legislative form of 'induced infringement', but the Supreme Court reversed this finding.<sup>97</sup> These cases have received significant commentary in the US because they raise the prospect that parties can arrange their affairs to have a client or customer perform a step of a method patent and thereby avoid infringement liability. As described in the chapter, this finding may be problematic because patentees to a wide variety of technologies, in particular, computer networking and Internet mediated communications, potentially rely on divided performance constituting infringement. Accordingly, this lack of protection may mean the patent incentive to create certain technologies is diminished. On the other hand, the majority's finding in the Federal Circuit has been criticised for unnecessarily extending the boundaries of patent infringement law and opening it up to abuse.<sup>98</sup> Given this controversy in the US, this chapter analyses whether the facts from these cases might create infringement liability in Australia. Finding that no clear liability pathway exists, this chapter continues to examine this outcome in the context of patent law's underpinnings and the current operation of 'procured infringement'<sup>99</sup> in Australia. From the analysis in this chapter, conclusions are then drawn on how procured infringement should operate in the future.

Chapter 4 focuses on a specific type of secondary infringement that exists under s 117(2)(b) of the *Patents Act*. This provision can, in certain circumstances, make the act of supplying non-patented products that can be put to both non-infringing and infringing uses, constitute infringement itself. One of the key reasons to implement this provision was to give patentees additional protection for

<sup>97</sup> See generally, *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111 (2014); *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301 (Fed Cir, 2012).

<sup>98</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301, 1325 (Fed Cir, 2012) 1333 (Newman JJ).

<sup>99</sup> *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239, 263; *Danisco AS v Novozymes AS (No 2)* (2011) 91 IPR 209, 244–45; *Damorgold Pty Ltd v Jai Products Pty Ltd* (2014) 105 IPR 60, 72.

patented uses of known products. However, in light of recent Australian case law and comparative law in the US, the analysis in this chapter shows that the provision's current operation extends too far. Of particular concern is the ability of patentees to use the provision to foreclose supply of certain non-patented products by third parties, even though the products have substantial non-infringing uses.

Chapter 5 builds directly on chapter 4, with the broad aim of recommending a legislative solution to the problem with s 117(2)(b) and thereby balance its ability to protect patented uses of known products with supply of them for non-infringing uses. Since one of the primary reasons for legislating the provision was the drive of international harmonisation, this chapter evaluates foreign approaches to the equivalent of s 117(2)(b) in the US and UK. A wide variety of legislative mechanisms are analysed and one is identified as a solution to further refine the operation of the provision.

Chapter 6 examines the exemption to infringement liability known as innocent infringement, which is legislated in s 123 of the *Patents Act*. Broadly speaking, this provision is designed to absolve infringers from monetary relief for their infringing actions if, at the time, they were unaware that they were infringing a patent. Although this provision is infrequently litigated, it has come to notice recently due to one Australian case and a legislative amendment to the equivalent provision in the US. This chapter focuses on the role of marking products as patented in determining whether infringers were aware that their activities constituted infringement. Through the use of the term 'marking products as patented' this thesis is referring to the practise of physically marking products as 'patented'. Since little case law exists on the issue, and the topic has received little scholarship, this chapter offers an expansive analysis of the provision, including quite an extensive interpretation of it with reference to the foreign legislation it was based on. This chapter also extends the economic-based rationale for patents to the law of innocent infringement, incorporating Bessen and Meurer's idea of demarcating the perimeters of patents.<sup>100</sup> From the observations made in this chapter, recommendations are made to improve the operation of the provision.

Chapter 7 addresses law relating to false representations about patents, with a specific focus on the law prohibiting false patent marking under s 178(2) of the *Patents Act*. As alluded to above, false patent marking can operate to illegitimately exclude competitors from markets by deceiving them into believing that they risk patent infringement. False patent marking has recently come to global notice due to a recent boom and bust cycle of litigation in the US. Very little scholarship has been conducted on s 178(2), as a result this chapter explores the provision's history, interpretation, economic underpinnings, and overlapping operation with consumer law. This chapter also uses the causative factors of the litigation cycle in the US to examine the effectiveness of the Australian

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<sup>100</sup> See generally, James Bessen and Michael J Meurer, *Patent Failure* (Princeton University Press, 2008) ch7.

provision. In light of the economic basis for the law, and insight gained through the comparison, recommendations for law reform are made to improve the operation of the provision.

#### IV. Scope

In conducting this study, two limitations have narrowed its scope. First, although all the chapters build on foreign domestic material to some extent, this thesis does not purport to offer an exhaustive assessment of foreign domestic law. Second, throughout this thesis, short historical evaluations of various laws are provided. In each circumstance the historical evaluation is not provided as an exhaustive account of the development of the law, but draws on historical fact to inform various arguments.

#### V. Nomenclature and Footnoting Issues

Most terminological matters are dealt with in each chapter, however, at this stage it is advantageous to draw attention to two specific uses of terminology. Section 13(1) of the *Patents Act* confers on patentees the ‘twin rights’ to ‘exploit’ a patent, and to ‘authorise’ others to ‘exploit’ a patent.<sup>101</sup> ‘Direct infringement’ is a term commonly used in patent law, and in *Blueport Nominees Pty Ltd v Sewerage Management Services Pty Ltd*,<sup>102</sup> Barker J directly addressed the meaning of it under the *Patents Act*. His Honour classified infringement of both the right to ‘exploit’ a patent and the right to ‘authorise’ others to ‘exploit’ a patent, as ‘direct infringement’.<sup>103</sup> Barker J did clarify that these rights are different ‘species’ of ‘direct infringement’,<sup>104</sup> however, this definition raises the possibility of ambiguous use of the term ‘direct infringement’. This ambiguity occurs because extrinsic material to the *Patents Act*<sup>105</sup> and modern case law use the term ‘direct infringement’ as a synonym for when a party encroaches upon a patentees right to ‘exploit’ a patent.<sup>106</sup> As a result, when discussing Australia law, this thesis will eschew the terms ‘direct infringement’ and ‘direct infringer’. Instead it will use the terms ‘infringement by exploitation’ and ‘infringer by exploitation’.

Whilst this nomenclature makes sense when discussing Australian patent law, it does not in the UK and US. ‘Direct infringement’ is a term of art in these countries. More specifically, it refers to infringement under s 60(1) of the *Patents Act 1977* (UK)<sup>107</sup> and 35 US § 271(a) respectively.<sup>108</sup> Thus, the term ‘direct infringement’ will be retained when discussing law in these jurisdictions, as will the term ‘indirect infringement’ which, as case law in both jurisdictions indicates, refers to infringement

<sup>101</sup> *Patents Act 1990* (Cth) s 13(1); *Bristol-Myers Squibb Co v Apotex Pty Ltd* (2015) 228 FCR 1, 33.

<sup>102</sup> *Blueport Nominees Pty Ltd v Sewerage Management Services Pty Ltd* [2015] FCA 631 (24 June 2015).

<sup>103</sup> *Ibid* [84]–[88].

<sup>104</sup> *Ibid* [85].

<sup>105</sup> See, eg, Industrial Property Advisory Committee, Parliament of Australia, *Patents, Innovation and Competition in Australia* (1984) 67.

<sup>106</sup> See, eg, *Northern Territory v Collins* (2008) 235 CLR 612, 642 (Crennan J).

<sup>107</sup> *Patents Act 1977* (UK) c 37, s 60(1).

<sup>108</sup> *Schütz (UK) Ltd v Werit UK Ltd* [2013] 2 ALL ER 177, 184 (Neuberger J); *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111, 2115–7 (2014).

in the UK under s 60(2) of the *Patents Act 1977* (UK)<sup>109</sup> and infringement under 35 US §§ 271(b)–(c).<sup>110</sup> Related to this nomenclature, the phrase ‘contributory infringement’, as far as possible, will not be used in this thesis because it can be confusing.<sup>111</sup> Not using the term ‘contributory infringement’ can, in itself, cause some confusion when discussing US law because this terminology is commonly used to refer to certain causes of action there. However, by outlining this nomenclature now, hopefully any ambiguity can be avoided.

The term ‘indirect infringement’ is used in Australian law but its meaning can also be ambiguous. In *Danisco AS v Novozymes AS (No 2)*,<sup>112</sup> Bennett J used the term to refer to ‘authorised infringement’.<sup>113</sup> But clearly, this conflicts with Barker J’s assessment in *Blueport Nominees Pty Ltd v Sewerage Management Services Pty Ltd*. Consequently, this thesis will only use the term ‘indirect infringement’ to describe causes of action in the US and UK. When referring to causes of action other than infringement by exploitation in Australia, this thesis will use the term ‘secondary infringement’. This means that ‘secondary infringement’ refers to supply infringement under s 117 of the *Patents Act*, as well as ‘authorising’ others to ‘exploit’ the invention under s 13(1) of the *Patents Act*, and the common law causes of action ‘common design’<sup>114</sup> and ‘procurement infringement’.<sup>115</sup> In this way, infringement by exploitation results from exploitation of a patented invention by one party, whereas secondary infringement results from a party’s involvement with the exploitation of the invention that may be wholly or partially performed by another. **Table 1** summarises the nomenclature used in this thesis.

*Table 1* Terms used in this thesis

Infringement Terminology Used In This Thesis	What The Term Refers To
Infringement by exploitation	Encroachment upon a patentees right to ‘exploit’ a patent under s 13(1) of the <i>Patents Act</i> .
Authorised Infringement	Encroachment upon a patentees right to ‘authorise’ others to ‘exploit’ a patent under s 13(1) of the <i>Patents Act</i> .
Secondary infringement	Authorised infringement under s 13(1) of the <i>Patents Act</i> , supply infringement under s 117 of the <i>Patents Act</i> , and the common law causes of action ‘common

<sup>109</sup> Ibid.

<sup>110</sup> *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111, 2116 (2014).

<sup>111</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301, 1341 (Fed Cir, 2012); Ann Dufty, *Report to the Industrial Property Advisory Committee* (Monash University Law School, 1983) vol 1, 208.

<sup>112</sup> *Danisco AS v Novozymes AS (No 2)* (2011) 91 IPR 209.

<sup>113</sup> Ibid 215, 244–5; see also, *Zetco Pty Ltd v Austworld Commodities Pty Ltd (No 2)* [2011] FCA 848 (1 August 2011) [5]; *Apotex v Les Laboratoires Servier (No 2)* (2012) 293 ALR 272, 280.

<sup>114</sup> *Apotex v Les Laboratoires Servier (No 2)* (2012) 293 ALR 272, 277; *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 118–9; see also, *Morton-Norwich Products v Intercen Ltd* [1978] RPC 501, 510–11.

<sup>115</sup> *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239, 263; *Danisco AS v Novozymes AS (No 2)* (2011) 91 IPR 209, 244–45; *Damorgold Pty Ltd v Jai Products Pty Ltd* (2014) 105 IPR 60, 72.

	design’ and ‘procured infringement’.
Direct infringement	Infringement under s 60(1) of the <i>Patents Act 1977</i> (UK) c 37 and infringement under 35 US § 271(a).
Indirect infringement	Infringement under s 60(2) of the <i>Patents Act 1977</i> (UK) c 37 and 35 US §§ 271(b)–(c).

The citation guide followed by the University of Tasmania Law School is the *Australian Guide to Legal Citation*.<sup>116</sup> This guide recommends that in certain circumstances when citing a reference that has already been cited, ‘above n’ should be used to abbreviate that resource. This recommendation applies to books and articles, amongst other sources, when they are used in a previous footnote other than the immediately preceding footnote.<sup>117</sup> Whilst the *Australian Guide to Legal Citation* generally sets the benchmark in Australian legal referencing, this practice causes significant inconvenience to readers because if they want to obtain citation details, including simply observing the title of what is cited, they must often turn (or scroll) several pages to find such details. This often causes readers to lose track of where they were up to and interrupts their train of thought. For these reasons, this thesis will not cite sources using ‘above n’.

## VI. External Publications & Contributions from Co-Authors

Modern legal research involves considerable team work. It is also very common to publish work as it develops. Aspects of this thesis have been published in peer-reviewed journals and some work has benefited with assistance from others. Where this has occurred, it is recorded in **Table 2**.

*Table 2* Details of publications and contributions from co-authors

Chapter	Publication Details	Co-Authors and Their Contribution to the Chapter	Proportion of the Chapter Published (or in preparation)
2	In preparation for submission	Professor Dianne Nicol and Dr Jane Nielsen both contributed critical revisions	The chapter is currently being significantly re-written for publication, but around half of the chapter is being retained as written in this thesis.
4	<i>Monash Law Review</i> <sup>118</sup>	N/A	The chapter is effectively published as written here, with minor differences limited to those necessary for publication as an article
6	<i>Australian Intellectual</i>	N/A	The chapter is effectively published as written here, with minor differences

<sup>116</sup> Melbourne University Law Review Association, *Australian Guide to Legal Citation* (Melbourne University Press, 3<sup>rd</sup> ed, 2010).

<sup>117</sup> *Ibid* 8–9.

<sup>118</sup> Johnathon E Liddicoat, ‘Reluctance Realised? Emerging Problems with s 117(2)(b) of the *Patents Act 1990* (Cth)’ forthcoming *Monash Law Review*.

	<i>Properly Journal</i> <sup>119</sup>		limited to those necessary for publication as an article
7	<i>Journal of Law, Information &amp; Science</i> <sup>120</sup>	Professor Dianne Nicol contributed critical revisions.	The chapter is effectively published as written here, with minor differences limited to those necessary for publication as an article.

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<sup>119</sup> Johnathon E Liddicoat, 'Re-Evaluating Innocent Infringement in Australia: Patent Numbers and Virtual Marking' (2014) 24 *Australian Intellectual Property Journal* 18.

<sup>120</sup> Johnathon E Liddicoat and Dianne Nicol, 'Re-Evaluating False Patent Marking in Australia' (2012–2013) 22(2) *Journal of Law, Information and Science* 128.



## Chapter 1

# Standing on the Edge: What Type of ‘Exclusive Licensees’ Should Be Able to Initiate Patent Infringement Actions?

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## Introduction

As foreshadowed in the introduction to this thesis, the substantive analysis in this study begins with an examination of standing in patent law. This is a logical place for a thesis on patent infringement law to begin, because if a party alleging infringement does not satisfy the relevant standing requirements, then, even if the infringing actions are beyond doubt, no finding of infringement can be made by a court.

Standing is a requirement of many legal actions. Essentially, a party has to show that they have a certain threshold of interest in a case before they will be eligible to litigate. For Australian lawyers, standing is often associated with constitutional and administrative law actions. However, a recent series of judicial decisions addressing the issue have now arisen in patent law. The *Patents Act 1990* (Cth) ('the *Patents Act*') specifies various standing requirements for different actions. Standing to revoke a patent is open to any party,<sup>1</sup> as is opposition.<sup>2</sup> In contrast, applications for relief from unjustified threats of infringement, and to rectify the register via a court are limited to 'aggrieved' persons.<sup>3</sup> The focus of this chapter is on standing to initiate infringement actions under s 120(1) of the *Patents Act*, which states, 'infringement proceedings may be started in a prescribed court ... by the patentee or an exclusive licensee.'<sup>4</sup> Relevantly, 'patentee' is defined as 'the person for the time being entered in the Register as the grantee or proprietor of a patent'<sup>5</sup> and 'exclusive licensee' means, 'a licensee under a licence granted by the patentee and conferring on the licensee, or on the licensee and persons authorised by the licensee, the right to *exploit* the patented invention throughout the patent area to the exclusion of the patentee and all other persons.'<sup>6</sup>

The Australian decisions alluded to above have highlighted issues with the definition of 'exclusive licensee'. More specifically, the question that has arisen is whether an exclusive licensee is only constituted by a party who controls the full complement of rights conferred in a patent — this type of exclusive licence will be referred to in this chapter as a 'panoplied exclusive licence', in reliance on the etymological root of 'panoply' as a complete suit of armour.<sup>7</sup> Or, in the alternative, the definition of 'exclusive licensee' also includes a licensee who receives exclusivity to a partitioned sphere of rights in a patent (a 'partitioned exclusive licence').<sup>8</sup> Three variations of partitioned exclusive licences have been litigated in Australia. The first, and most litigated type, arises when a licensee exclusively

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<sup>1</sup> *Patents Act 1990* (Cth) s 138(1).

<sup>2</sup> *Ibid* s 59.

<sup>3</sup> *Ibid* ss 128(1), 192.

<sup>4</sup> *Ibid* s 120(1). Other non-statutory mechanisms to obtain standing have been outlined in theory, see, *Emory University v Biochem Pharma Inc* (1998) 86 FCR 1, 10 (Lindgren J); *Uprising Dragon Ltd v Benedict Trading & Shipping Pty Ltd* (1987) 16 FCR 93, 102 (French J).

<sup>5</sup> *Patents Act 1990* (Cth) sch 1 (definition of 'patentee').

<sup>6</sup> *Ibid* sch1 (definition of 'exclusive licensee') (emphasis added).

<sup>7</sup> *Macquarie Concise Dictionary* (Online 6th ed, Macquarie Dictionary Publishers, 2013).

<sup>8</sup> For the remainder of this chapter, unless otherwise indicates, the term 'standing' will be used to refer solely to the ability to initiate infringement proceedings.

controls less than the full list of ‘actions’ specified in the definition of ‘exploit’.<sup>9</sup> As explored in more detail below, this type of licence arises, for example, when a licensee has the exclusive ability to sell an invention but not make or import it. The second variation arises when a licensee has the right to exclusively exploit a patent in a geographic area less than the ‘patent area’,<sup>10</sup> and the third occurs when a licensee has the right to exclusively exploit a patent in a specific field-of-use. These three types of licences will be referred to as ‘action exclusive licences’, ‘geographic exclusive licences’, and ‘field-of-use exclusive licences’ respectively (see **Figure 1**).<sup>11</sup>

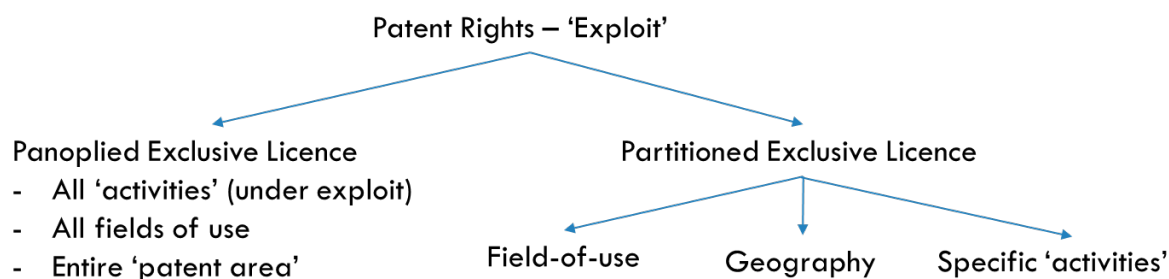


Figure 1 Diagram of the licences analysed in this chapter.

Unlike standing in constitutional law, there is sparse Australian commentary on standing in patent law,<sup>12</sup> and none that engages with its justifications or jurisprudential underpinnings. Extrinsic material to the *Patents Act* has not addressed the issue either,<sup>13</sup> and, until a spate of cases in the last 10 years, there has been little case law. As a result, it is difficult to judge whether standing requirements meet legislative aims, or are consistent with patent jurisprudence. The aim of this chapter is to evaluate whether standing requirements under the *Patents Act* are coherent with its underpinnings, and if not, recommend reform. Accordingly, this chapter develops an economic-based analysis of standing to initiate patent infringement actions, and compares Australian patent standing requirements with law in other major common law countries.

<sup>9</sup> These actions are often referred to as individual exclusive rights, for example the ‘exclusive right to make’, however, the Full Court of the Federal Court of Australia has recently specified that these are not rights in themselves but rather ‘activities’ that fall under the right of ‘exploit’, see, *Bristol-Myers Squibb Company v Apotex Pty Ltd* (2015) 228 FCR 1, 33; *Patents Act 1990* (Cth) ss 13(1), sch 1 (definition of ‘exploit’).

<sup>10</sup> *Patents Act 1990* (Cth) s 13(3), sch 1 (definition of ‘patent area’).

<sup>11</sup> Timothy Denny Greene, ‘“All Substantial Rights”: Toward Sensible Patent Licensee Standing’ (2012–2013) 22 *Federal Circuit Bar Journal* 1, uses a similar nomenclature, at, 6–9.

<sup>12</sup> For example, see, Meltzer et al, ‘Joint Ownership of IP – Is it the Best Option for Collaborators?’ (2005) 18(3) *Australian Intellectual Property Law Bulletin* 37, 40; Richard Aarons, ‘Further Analysis of Collaboration IP Ownership structures’ (2005) 18(3) *Australian Intellectual Property Law Bulletin* 41; Adam Liberman, ‘Some Problems with IP Holding Companies’ (2005) 18(3) *Australian Intellectual Property Law Bulletin* 45, 45–6.

<sup>13</sup> See, Commonwealth, *Parliamentary Debates*, Senate, 29 May 1990, 1271 (Robert Ray); Commonwealth, *Parliamentary Debates*, House of Representatives, 10 October 1990, 2565 (Simon Crean); Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984); Ann Dufty, *Report to the Industrial Property Advisory Committee*, (Monash University Law School, 1983) vol 1; Explanatory Memorandum, *Patents Bill 1990* (Cth); Statement of the Minister for Science, Government Response to the Report of the Industrial Property Advisory Committee, ‘Patents, Innovation and Competition in Australia’ (1986) 56 *The Australian Official Journal of Patents, Trade Marks and Designs* 47;

Following this aim, this chapter is divided into three parts. Part 1 canvasses relevant Australian case law and demonstrates that, in the absence of a High Court decision to the contrary, only panoplied exclusive licensees have standing. Part 2 develops an economic-based analysis of the jurisprudence underpinning patent licensing and standing. In particular, it examines patents as economic assets in market economies and the role of division of labour in bringing inventions to markets. Part 3 explores standing requirements for exclusive licensees in the US and UK. This chapter concludes by observing that, consistent with patent jurisprudence and harmonisation efforts, standing should be broadened in Australia to include any licensee who exclusively controls a sphere of patent rights.

## I. Australian Law

### A. Preliminary Aspects to Standing

To put the issues addressed in this chapter in context, it is first necessary to outline related aspects of standing law. Patent licences, at their most basic, are a type of contract that operates as a mechanism for patentees to electively permit others to practise their invention. Within the broad confines of laws relevant to licences, such as competition and contract law, patentees have freedom to contract. Thus, they may include a variety of terms including those directed to panoplied or partitioned exclusive licences. Section 120(2) of the *Patents Act* specifies that, although a patentee may begin infringement proceedings alone, when an exclusive licensee initiates an action, the patentee must be ‘joined as a defendant unless joined as a plaintiff’.<sup>14</sup> The Australian Law Reform Commission, in their report on gene patents and human health, stated that, in effect, an exclusive licensee ‘stands in the shoes of the patent holder, subject to any additional terms relating to enforcement of patent rights in the licence agreement (for example, allocation of any damages awards, liability for the costs of any infringement proceedings, or the right to control proceedings)’.<sup>15</sup> Section 120(3) continues that, ‘[a] patentee joined as a defendant is not liable for costs unless the patentee enters an appearance and takes part in the proceedings.’<sup>16</sup>

There are various reasons why it is appropriate for patentees to be joined in any proceedings relating to their patents, including that it makes them bound by the judgment, avoids *res judicata* issues, gives them an opportunity to be heard, and allows discovery of documents that may affect validity, infringement, or the licensee’s standing.<sup>17</sup> However, due to circumstance, they need not enter a plea because they may have no interest in the case that is being pursued by the licensee. Such a situation could arise, for example, if a patentee licenses a patent in return for lump sum payments not linked

<sup>14</sup> *Patents Act 1990* (Cth) s 120(2).

<sup>15</sup> Australian Law Reform Commission, *Genes and Ingenuity: Gene Patenting and Human Health*, Report No 99 (2004) vol 1, (ALRC Report 99) 230 [9.40] n 62.

<sup>16</sup> *Patents Act 1990* (Cth) s 120(3).

<sup>17</sup> *Federal Court Rules 2011* (Cth) r 20.13; the application of joinder rules, *Federal Court Rules 2011* (Cth) rr 9.02–9.05, are considered in more detail below.

to the success of the product protected by the patent. In this scenario they will receive payments regardless of any enforcement.

Section 187 of the *Patents Act* requires that licences, assignments and other particulars of patents must be registered.<sup>18</sup> In *Stack v Brisbane City Council (No 2)*,<sup>19</sup> Drummond J held that the combined interpretation of ss 120 and 187 meant that an unregistered assignee could not ordinarily bring an infringement action in their own name,<sup>20</sup> but went on to outline instances in which an unregistered assignee could obtain relief.<sup>21</sup> However, the position is different for exclusive licensees. In *Grant v Australian Temporary Fencing Pty Ltd*,<sup>22</sup> Holmes J held that because the definition of ‘exclusive licensee’ does not include a reference to registration, it is not necessary for a licensee to be registered for them to initiate infringement actions.<sup>23</sup> Despite this, s 195(1) states, ‘[t]he Register is prima facie evidence of any particular registered in it.’<sup>24</sup> Thus, registration may make it easier for an exclusive licensee to initiate an infringement action, as any alleged infringer contesting the licensee’s standing will have to overcome this prima facie evidence. But irrespective of the Register, a licensee will have standing if they can prove their licence is exclusive.

Three further ancillary aspects of licences should be noted. First, parties to a licence cannot retrospectively change the rights and obligations between them.<sup>25</sup> This means that a contract written as a non-exclusive licence and which operates as one, cannot be amended to state that at any time in the past it operated as an exclusive licence. Second, whether a licence is sole, exclusive, non-exclusive, or actually an assignment, will be determined by a court regardless of its title.<sup>26</sup> Generally speaking, this assessment will be based on rights conferred, wording of the contract and the objective intention of the parties.<sup>27</sup> Third, eligibility for financial relief is limited to time periods in which parties have standing.<sup>28</sup>

<sup>18</sup> *Patents Act 1990* (Cth) s 187(1); *Patent Regulations 1991* (Cth) 19.1(1).

<sup>19</sup> *Stack v Brisbane City Council (No 2)* (1996) 67 FCR 510.

<sup>20</sup> *Ibid* 513; see also *Townsend Controls Pty Ltd v Gilead* (1989) 16 IPR 469, 471–2 (van Doussa J).

<sup>21</sup> *Ibid* 513–5.

<sup>22</sup> *Grant v Australian Temporary Fencing Pty Ltd* (2003) 59 IPR 170.

<sup>23</sup> *Ibid* 179–80.

<sup>24</sup> *Patents Act 1990* (Cth) s 195(1); it is also worth noting that regardless of registration, under contract law, an exclusive licensee will usually have standing to pursue a patentee for relief from infringement via breach of contract, see, *Hassall v Wright* (1870) LR 10 Eq 509, 513.

<sup>25</sup> *Black & Decker Inc v GMCA Pty Ltd (No 2)* (2008) 76 IPR 99, 125 (Heerey J).

<sup>26</sup> For example see, *Reid v Moreland Timber Company Pty Ltd* (1946) 73 CLR 1; *Re An Application by the Preformed Line Products Company for an Extension of Letters Patent No 160999* [1971] ALJR 6, 8.

<sup>27</sup> See generally, *Reid v Moreland Timber Company Pty Ltd* (1946) 73 CLR 1; *Re An Application by the Preformed Line Products Company for an Extension of Letters Patent No 160999* [1971] ALJR 6, 8; *KD Kanopy Australasia Pty Ltd v Insta Image Pty Ltd* (2007) 71 IPR 615, 637–8.

<sup>28</sup> *Black & Decker Inc v GMCA Pty Ltd (No 2)* (2008) 76 IPR 99, 127 (Heerey J); discussing *Colbeam Palmer Ltd v Stock Affiliates Pty Ltd* (1968) 112 CLR 25, 36, 41 (Windeyer J).

## B. Standing to Initiate Patent Infringement Suits Under the *Patents Act 1990* (Cth)

The first federal Australian patent legislation, the *Patents Act 1903* (Cth), contained no statutory standing provision for exclusive licensees. Statutory standing for exclusive licensees was introduced into the *Patents Act 1952* (Cth), and the contemporary standing interpretation issues in Australia begin under it. Section 114(1) of the *Patents Act 1952* (Cth) specified that an ‘exclusive licensee may bring an action or proceeding for the infringement of a patent’.<sup>29</sup> ‘Exclusive licensee’ was defined to mean ‘a licensee under a licence granted by the patentee which confers on the licensee, or on the licensee and persons authorised by him, the right to make, use, exercise and vend the patented invention, throughout Australia, to the exclusion of all other persons, including the patentee.’<sup>30</sup> For reasons that will become apparent below, it is convenient to note the exclusive rights conferred under s 69 of the *Patents Act 1952* (Cth) were to ‘make, use, exercise and vend the invention...’.<sup>31</sup>

In the 1963 case, *Ex parte British Nylon Spinners* (‘*British Nylon Spinners*’),<sup>32</sup> the High Court was asked to determine whether either of the two licensee applicants qualified as exclusive licensees for the purpose of patent term extension.<sup>33</sup> Under s 95 of the *Patents Act 1952* (Cth), only exclusive licensees and patentees could apply for an extension, and the definition of exclusive licensee was the same for patent term extension as it was for standing.<sup>34</sup> The patent in question related to an ‘improved process for melt-spinning nylon yarn’.<sup>35</sup> The contract with the first licensee allowed the licensee to exclusively ‘make, use, exercise and vend’ the invention when the filament of yarn was .09 mm or less<sup>36</sup> — a field-of-use exclusive licence. The second licensee was permitted to control all the rights in the patent subject to the first licensee’s rights.<sup>37</sup> The Court found that, since neither of the licensees could enforce the patent to the ‘exclusion of all other persons’, neither were ‘exclusive licensees’ for the purpose of the Act and therefore neither had the ability to make the extension of term application.<sup>38</sup>

Field-of-use licences have not been specifically addressed in recent case law. However, in addressing the questions of whether action exclusive licensees, or geographic exclusive licensees have standing under the *Patents Act*, recent cases have revisited *British Nylon Spinners* and emphasised its importance. These cases begin with *Grant v Australian Temporary Fencing Pty Ltd*. Before analysing the case law though, it is first necessary to note the definition of ‘exploit’ under the *Patents Act*:

<sup>29</sup> *Patents Act 1952* (Cth) s 114(1).

<sup>30</sup> *Ibid* s 6 (definition of ‘exclusive licensee’).

<sup>31</sup> *Ibid* s 69.

<sup>32</sup> *Ex parte British Nylon Spinners Ltd; Re Imperial Chemical Industries Ltd’s Patent* (1963) 109 CLR 336.

<sup>33</sup> *Ibid* 338–9.

<sup>34</sup> *Ibid*; *Patents Act 1952* (Cth) s 95.

<sup>35</sup> *Ex parte British Nylon Spinners Ltd; Re Imperial Chemical Industries Ltd’s Patent* (1963) 109 CLR 336, 336.

<sup>36</sup> *Ibid*.

<sup>37</sup> *Ibid* 337.

<sup>38</sup> *Ibid* 340.

in relation to an invention it includes:

(a) where the invention is a product--make, hire, sell or otherwise dispose of the product, offer to make, sell, hire or otherwise dispose of it, use or import it, or keep it for the purpose of doing any of those things; or

(b) where the invention is a method or process--use the method or process or do any act mentioned in paragraph (a) in respect of a product resulting from such use.<sup>39</sup>

In *Grant v Australian Temporary Fencing Pty Ltd*, the defendant sought summary judgment on their counter claim to infringement and defence.<sup>40</sup> Amongst the defendant's arguments was that the plaintiff/licensee did not satisfy the definition of 'exclusive licensee' under the *Patents Act*, because the licence did not confer on the licensee all the activities in the definition of 'exploit'. Or more specifically, it did not confer the ability to import products.<sup>41</sup> In her Honour's decision, Holmes J noted that the rights conferred by a patent had changed between the *Patents Act 1952* (Cth) and *Patents Act*. Relevantly, they were exhaustively listed in the *Patents Act 1952* (Cth), whereas they are inclusively defined in the *Patents Act*.<sup>42</sup> From this her Honour reasoned that because the definition of 'exploit' under the *Patents Act* is not exhaustive, for a licence to be exclusive, it need not exhaustively list all of the actions under the definition of exploit.<sup>43</sup> Accordingly, Holmes J concluded that the *Patents Act* was open to 'a plurality of exclusive licences'<sup>44</sup> and that the failure to include a right to 'import' in the contract, which neither of the parties may have contemplated, was not necessarily fatal to it being an exclusive licence.<sup>45</sup> In deciding whether the licence was exclusive, Holmes J assessed various parts of the contract and the intention of the parties. Her Honour focused on the fact the contract left no residual rights to the licensor, referred to it as being exclusive, and included a provision to reduce the licence to a non-exclusive one.<sup>46</sup> In all, her Honour found that for the purposes of summary judgment, the licence was exclusive and therefore the plaintiff had standing.<sup>47</sup>

In *Pharmacia Italia SpA v Interpharma Pty Ltd*,<sup>48</sup> a licensee sought an interlocutory injunction against the respondent for importing an anti-tumour drug.<sup>49</sup> The respondent argued that the licensee lacked standing to bring the action because they failed to satisfy the definition of an 'exclusive licensee'. Relevantly, prior to the applicant obtaining their licence, which was purported to be exclusive, the

<sup>39</sup> *Patents Act 1990* (Cth) sch 1 (definition of 'exploit').

<sup>40</sup> *Grant v Australian Temporary Fencing Pty Ltd* (2003) 59 IPR 170, 171–2.

<sup>41</sup> *Ibid* 180.

<sup>42</sup> *Ibid* 182.

<sup>43</sup> *Ibid* 182–3.

<sup>44</sup> *Ibid*.

<sup>45</sup> *Ibid* 183.

<sup>46</sup> *Ibid*.

<sup>47</sup> *Ibid*.

<sup>48</sup> *Pharmacia Italia SpA v Interpharma Pty Ltd* (2005) 67 IPR 397.

<sup>49</sup> *Ibid* 398–9.

patentee granted a licence to another party, which remained on foot.<sup>50</sup> Sundberg J engaged with Holmes J's idea of multiple exclusive licences under s 120, and held that, based on this, the licensee had 'an arguable case' that it had standing to initiate proceedings.<sup>51</sup>

In *Bristol-Myers Squibb Co v Apotex Pty Ltd (No 5)*<sup>52</sup> the first applicant was the commercialising company in Australia for the drug aripiprazole. The second applicant was the patentee and global manufacturer.<sup>53</sup> The licence agreement between the applicants specified that the first applicant was the 'exclusive licensee', but it also reserved the right to manufacture aripiprazole to the second applicant.<sup>54</sup> Accordingly, the respondent, who was contesting an infringement claim,<sup>55</sup> argued that the first applicant was not an 'exclusive licensee' because it could not exclusively exercise the full range of activities under the definition of 'exploit'.<sup>56</sup> Being the first case to substantively decide the issue, Yates J reviewed the authorities, in particular, *British Nylon Spinners, Pharmacia Italia SpA v Interpharma Pty Ltd*, and *Grant v Australian Temporary Fencing Pty Ltd*, and rejected Holmes J's reasoning in *Grant v Australian Temporary Fencing Pty Ltd*.<sup>57</sup> Yates J stated that s 13(1) provides the 'twin rights'<sup>58</sup> of exploitation and authorisation and 'that the definition of 'exclusive licensee' operates in harmony with the rights conferred by the Act on the patentee.'<sup>59</sup> Consistent with this, his Honour stated that the *Patents Act* 'speaks of "the right to exploit" the invention as a single, indivisible right. The word "exploit" is used in the Act as a hypernym to cover a range of activities.'<sup>60</sup> Expanding further on this reasoning, Yates J continued that:

[the] use of disjunctive language in the definition of 'exploit' to identify particular activities falling within the scope of the term does not create separate rights with respect to those activities. It merely recognises that the right to exploit covers a range of activities, any one of which, if undertaken, would amount to the exercise of the right to exploit.<sup>61</sup>

Yates J also found that this reasoning was consistent with the High Court's finding in *British Nylon Spinners*. On this point his Honour stated that 'the essential reasoning of the High Court in *British Nylon Spinners* with respect to the meaning of "exclusive licensee" in s 6 of the 1952 Act: [was that] the patentee has conferred on the licensee, exclusively, the exercise of the rights that the patentee itself has been granted under the patent.'<sup>62</sup> Further, regardless of the replacement of 'make, use,

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<sup>50</sup> Ibid 400.

<sup>51</sup> Ibid 402.

<sup>52</sup> *Bristol-Myers Squibb Co v Apotex Pty Ltd (No 5)* (2013) 104 IPR 23.

<sup>53</sup> Ibid 103.

<sup>54</sup> Ibid 102–3.

<sup>55</sup> Ibid 26.

<sup>56</sup> Ibid 101.

<sup>57</sup> Ibid 101, 105.

<sup>58</sup> Ibid 105.

<sup>59</sup> Ibid.

<sup>60</sup> Ibid 106.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid.



exercise and vend' with 'exploit' between the 1952 and 1990 Acts, his Honour concluded that this does not change the fact that 'the definition of "exclusive licensee" in each Act refers to the conferral by the patentee of a single licence that precludes the patentee, and any person deriving authority from the patentee, from exercising the rights granted by the patent.'<sup>63</sup> Accordingly, his Honour found that because the first applicant did not have the right to manufacture, it did not have standing.<sup>64</sup> On appeal to the Full Court of the Federal Court of Australia in *Bristol-Myers Squibb Co v Apotex Pty Ltd*,<sup>65</sup> Besanko, Jagot and Nicolas JJs unanimously found no error in Yates J's reasoning, and quoted his Honour's judgment at length.<sup>66</sup>

From the Full Court's reasoning in *Bristol-Myers Squibb Co v Apotex Pty Ltd*, it is reasonable to infer that exclusive geographic licences are unlikely to confer standing because the 'indivisible right of exploit' would be divided. The case of *KD Kanopy Australasia Pty Ltd v Insta Image Pty Ltd* ('*KD Kanopy*'),<sup>67</sup> which was decided before *Bristol-Myers Squibb Co v Apotex Pty Ltd*, is consistent with this reasoning. However, the case warrants further scrutiny, because it raises an aspect of the law not yet detailed. In this case, the licence in question conferred exclusive control of the patent to everywhere in Australia except New South Wales.<sup>68</sup> Since the *Patents Act* defines an exclusive licensee to be one that has 'the right to exploit the patented invention throughout the patent area to the exclusion of the patentee and all other persons', and 'patent area' is defined to include Australia and the Australian continental shelf,<sup>69</sup> the respondent argued that the licensee did not have standing.<sup>70</sup> On a close reading of this case it appears that, by itself, this evidence would have defeated the licensee's claim to standing. However, evidence presented to the Court persuaded Kiefel J to find that an oral amendment had conferred exclusive rights across the patent area. Accordingly, her Honour found that the licensee had standing from the date of the amendment.<sup>71</sup>

In all, the effect of the decisions discussed in this part is that, in the absence of overruling High Court authority, licensees that do not exclusively control the panoply of patent rights will not have standing under s 120.

## II. Jurisprudence & Justifications

This part is divided into four sections: the first addresses economic-based justifications for patent law as applied to standing to initiate infringement suits; the second considers other related legal aspects

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<sup>63</sup> Ibid.

<sup>64</sup> Ibid 106–7; see also, *Blue Gentian LLC v Product Management Group Pty Ltd* (2014) 110 IPR 453, 486–8.

<sup>65</sup> *Bristol-Myers Squibb Co v Apotex Pty Ltd* (2015) 228 FCR 1.

<sup>66</sup> Ibid 28–33.

<sup>67</sup> *KD Kanopy Australasia Pty Ltd v Insta Image Pty Ltd* (2007) 71 IPR 615.

<sup>68</sup> Ibid 636–7.

<sup>69</sup> *Patents Act 1990* (Cth) sch 1 (definition of 'patent area').

<sup>70</sup> *KD Kanopy Australasia Pty Ltd v Insta Image Pty Ltd* (2007) 71 IPR 615, 636.

<sup>71</sup> Ibid 638–9.

of standing; the third analyses arguments against standing for partitioned exclusive licensees; and the fourth summarises the discussion in this section.

#### A. Economic Reasoning

In an article by Professors Roger Blair and Thomas Cotter, the authors outline economic justifications for standing in intellectual property law, but do not comprehensively address standing for partitioned exclusive licensees.<sup>72</sup> This chapter extends their reasoning. At the beginning of their article, the authors outline three assumptions that are also adopted here.<sup>73</sup> First, the main contemporary justification underpinning patents is that the conferral of exclusive rights in inventions incentivises innovation and is welfare enhancing.<sup>74</sup> Blair and Cotter note that this justification is open to some doubt.<sup>75</sup> However, they also acknowledge that whether patent regimes have a net positive effect is a complex question without a definitive answer.<sup>76</sup> The introduction to this thesis explains that the aim of this work is to review and where necessary outline improvements to current laws based on the assumption that this justification is valid.<sup>77</sup> Accordingly, this chapter will proceed under this assumption too.

Blair and Cotter's second assumption is that the ability to transfer exclusive patent rights is also generally welfare enhancing. The authors note that this assumption is 'not immune from criticism',<sup>78</sup> and that the validity of this second assumption is difficult to measure in practice, but the evidence of transferring patent rights being problematic is limited.<sup>79</sup> They also argue that even if it was a genuine issue, it would be confined to certain industries in certain time periods and therefore would probably be better addressed elsewhere than in standing law.<sup>80</sup>

Beyond Blair and Cotter's analysis of this second assumption, further support can be found for it in application of fundamental economic principles. In the background of patent law is the broad structure of a free market economy, which is based upon the assumption that, in the absence of market failure, it will efficiently allocate resources.<sup>81</sup> Key features of market economies, relevant to

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<sup>72</sup> Roger D Blair and Thomas F Cotter, 'The Elusive Logic of Standing Doctrine in Intellectual Property Law' (1999–2000) 74 *Tulane Law Review* 1323.

<sup>73</sup> *Ibid* 1330–6.

<sup>74</sup> *Ibid* 1330–5.

<sup>75</sup> *Ibid* 1332–5.

<sup>76</sup> *Ibid* 1333–5.

<sup>77</sup> See, Introduction, pt I.

<sup>78</sup> See, Roger D Blair and Thomas F Cotter, 'The Elusive Logic of Standing Doctrine in Intellectual Property Law' (1999–2000) 74 *Tulane Law Review* 1323, 1335 and references therein.

<sup>79</sup> *Ibid*.

<sup>80</sup> *Ibid* 1335–6.

<sup>81</sup> Merges, Menell and Lemley, *Intellectual Property in the New Technological Age* (Aspen Publishers, 6<sup>th</sup> ed, 2012) 11–3; Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 11–18; Economic Planning Advisory Council, *Promoting Competition in Australia* (Australian Government Publishing Service, Canberra, 1989) 5–6; Philip L Williams, 'Why regulate for competition?' in James M (ed), *Regulating for Competition?* (Centre for Independent Studies Ltd, 1989) 13–16; Johnathon E Liddicoat, 'Re-

the analysis here, include, division of labour, decentralised decision making, and Adam Smith's 'invisible hand'. 'Division of labour' refers to the development of specialised skill sets for efficient production of goods. As Adam Smith, the father of modern economics, observed, 'the greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgment with which it is anywhere directed, or applied, seem to have been the effects of the division of labour.'<sup>82</sup> 'Decentralised decision making', as it is used here, refers to individual actors being able to decide on how to manage property. It is critical to Adam Smith's 'invisible hand,' which, as it is commonly understood, is the idea that social benefits arise from self-motivated individual actions and trade.<sup>83</sup> Thus, it makes sense for patentees to have the benefit of electing between, or using a mix thereof, commercialising themselves, assigning their rights, and licensing parties to exploit the invention, to enable them to participate in the broader market economy and realise efficient utilisation of their invention. Indeed, these features are key aspects of what is known as the 'prospect theory' of patent law, which posits that patents create proprietary prospects in markets for patentees, and their licensees, to exploit.<sup>84</sup>

The utility of transferring patent rights has also been empirically observed. Statistics from a recent survey of Australian inventors shows that of 2689 respondents who had a pending or granted patent, over 43% reported that attempts were made to licence or sell their invention.<sup>85</sup> There is no doubt that some technology is licensed or sold because patentees want to move on to other projects. In general, however, the reality is that quite often patentees do not have the expertise to take an invention from concept to market.<sup>86</sup> This is not a new revelation. In industries such as biotechnology and pharmaceuticals, few companies have the ability to conceive an invention, reduce it to practice, create a prototype, receive funding, create appropriate business structures, and then market and distribute a product.<sup>87</sup> These various areas of expertise, of which others also exist, provide an illustration of the division of labour that exists in modern innovation. Accordingly, without compelling evidence to the contrary, it is not difficult to subscribe to Blair and Cotter's second assumption.

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Evaluating Innocent Infringement in Australia: Patent Numbers and Virtual Marking' (2014) 25 *Australian Intellectual Property Journal* 18, 21–2.

<sup>82</sup> Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (Strahan and Cadell, 4<sup>th</sup>, 1776) vol 1, 8. More generally see, chs 1–3.

<sup>83</sup> Ibid vol IV, 349; Gans et al, *Principles of Economics* (Thompson, 2<sup>nd</sup> ed, 2003) 9–10; Eduardo Pol and Peter Carroll, *An Introduction to Economics with a View to Innovation* (Innovation Planet, 2005) ch 2.

<sup>84</sup> Kenneth W Dam, 'The Economic Underpinnings of Patent Law (1994) 23 *Journal of Legal Studies* 247, 249–51; see also, Introduction pt II.

<sup>85</sup> Nicol et al, *The Innovation Pool in Biotechnology: The Role of Patents in Facilitating Innovation* (Occasional Paper No 8, Centre for Law and Genetics, 2014) 48 <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2503314](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2503314)>; see also, Jensen et al, 'Estimating the Patent Premium: Evidence from the Australian Inventor Survey' (2011) 32 *Strategic Management Journal* 1128.

<sup>86</sup> For an exploration in the Australian drug discovery and development sector see, Nicol et al, *The Innovation Pool in Biotechnology: The Role of Patents in Facilitating Innovation* (Occasional Paper No 8, Centre for Law and Genetics, 2014) 48, 49–50, 57–65, 76–80, 84–6, 87–9 <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2503314](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2503314)>.

<sup>87</sup> Ibid.

The first two assumptions lead naturally to the third, that patent rights should not have their value diminished based on the way they are transferred.<sup>88</sup> A key consideration underpinning this assumption is that although exclusive patent rights are an exception to a free market economy, upon their creation, patentees choose how they are to be exploited and, patented products often directly compete with other substitutable products.<sup>89</sup> If patents are welfare enhancing because of the exclusive rights they offer, then consistent with the operation of market economies,<sup>90</sup> parties holding exclusive rights should be able to choose how to enforce them. In short, if exclusive rights are to operate as incentives, the exclusive nature of the rights must be enforceable, otherwise the value of patent rights is reduced.<sup>91</sup> On this basis, Blair and Cotter conclude that panoplied exclusive licensees and patentees should, by default, have standing so that they can protect their interests in any exclusive rights.<sup>92</sup> For patentees in a licence agreement, the interest protected is any reversionary interest and any royalty stream that may accrue through continuing royalty payments. For panoplied exclusive licensees, this is the exclusivity for which they have bargained.<sup>93</sup>

As explored in part 1 of this chapter, current Australian standing law for patentees and panoplied exclusive licensees aligns with Blair and Cotter's rationale by conferring standing on them. Although the law does not currently confer standing on partitioned exclusive licensees, whether or not this position is consistent with justifications for patent law is more complex than simply applying Blair and Cotter's rationale. There are significant differences between panoplied exclusive licences and partitioned exclusive licences, and these differences must be explored to see whether Blair and Cotter's assumptions hold.

To begin with, it is helpful to consider whether non-exclusive licensees should have standing. Patent rights, by their definition, are negative exclusionary rights, carrying no right to exploit the invention, only to exclude others from exploiting it.<sup>94</sup> When a non-exclusive licence is granted, the patentee agrees not to exercise patent rights against the licensee, and the patentee retains the option to licence, or commercialise the invention in any other applicable manner. Thus, if a non-exclusive licensee had standing to initiate infringement, this would derogate from the patentee's ability to choose how to exploit their invention, and therefore the rights they have been granted. Moreover, a non-exclusive licensee has not been promised any exclusivity to exercise an invention, and to obtain

<sup>88</sup> Roger D Blair and Thomas F Cotter, 'The Elusive Logic of Standing Doctrine in Intellectual Property Law' (1999–2000) 74 *Tulane Law Review* 1323, 1336.

<sup>89</sup> Thomas F Cotter, 'Is This Conflict Really Necessary?: Resolving an Ostensible Conflict Between Patent Law and Federal Trademark Law' (1999) 3 *Marquette Intellectual Property Law Review* 25, 28–34.

<sup>90</sup> Joshua S Gans, Philip L Williams, and David Briggs, 'Intellectual Property Rights: A Grant of Monopoly or an Aid to Competition?' (2004) 37 *The Australian Economic Review* 436, 437–8.

<sup>91</sup> *Ibid* 437–9.

<sup>92</sup> Roger D Blair and Thomas F Cotter, 'The Elusive Logic of Standing Doctrine in Intellectual Property Law' (1999–2000) 74 *Tulane Law Review* 1323, 1392–6.

<sup>93</sup> *Ibid* 1394–7.

<sup>94</sup> *Patents Act 1990* (Cth) s 13(1), sch 1 (definition of 'exploit'); *JTI International SA v Commonwealth of Australia* (2012) 250 CLR 1, 30–2 (French CJ).

this they would, usually, have had to pay more. Thus, although a non-exclusive licensee may suffer economic harm resulting from infringement of the patent rights that they have paid to practise, the law does not confer them standing.

This reasoning resonates with the viewpoint of Learned Hand J in *A L Smith Iron Co v Dickson*:<sup>95</sup>

The ordinary case of a suit by a licensee against an infringer is in no sense the same [to an infringement suit by an exclusive licensee]. It is indeed true that a mere licensee may have an interest at stake in such a suit; his license may be worth much more to him than the royalties which he has agreed to pay, and its value will ordinarily depend on his ability to suppress the competition of his rivals. The reason why he is not permitted to sue is not because he has nothing to protect. But against that interest is the interest of the infringer to be immune from a second suit by the owner of the patent... Indeed, the owner may have granted a number of licenses, and it would be exceedingly oppressive to subject him to the will of all his licensees. These two interests in combination have been held to outweigh any interest of the licensee.<sup>96</sup>

The definition of an 'exclusive licence' for the purposes of patent law, as demonstrated in part 3 below, differs between jurisdictions. However, exclusive licences also have universal, uncontentious aspects. As with non-exclusive licences, an exclusive licensor agrees not to exercise patent rights against the licensee, but the pivotal difference between exclusive and non-exclusive licences is that, in an exclusive licence, the patentee agrees not to exploit the invention themselves, nor to permit another party to exploit it. A corollary of this is that a patentee to a panoplied exclusive licence, has, at least for a period of time, chosen how the sum total of their patent rights will be exercised. Similarly, for a partitioned exclusive licence, the patentee has chosen how the partitioned elements of their rights are to be exercised.

Bearing these differences in mind, it is useful to analyse partitioned exclusive licences in the context of Hand J's reasoning that patent standing law protects 'two interests'. The first interest his Honour described is an infringer's immunity from multiple suits regarding the same potentially infringing conduct. However, this interest is accounted for under s 120(2) of the *Patents Act* and r 9.03 of the *Federal Court Rules 2011* (Cth): s 120(2) requires that exclusive licensees and patentees are added to infringement actions; and r 9.03, in a somewhat overlapping way, specifies that '[i]f an applicant claims relief to which any other person is entitled jointly with the applicant... every person so entitled must be joined as a party to the proceeding'.<sup>97</sup> Thus, between s 120(2) and r 9.03, if an alleged infringer's activities encroach upon rights in a patent, then all the relevant licensees must also be added, and there is no chance of multiple suits. The second interest described by Hand J is that licensee standing should not derogate from a patentee's ability to licence other parties. Whilst this is

<sup>95</sup> *A L Smith Iron Co v Dickson*, 141 F 2d 3 (2<sup>nd</sup> Cir, 1944).

<sup>96</sup> *Ibid* 6.

<sup>97</sup> *Federal Court Rules 2011* (Cth) 9.03(a).

clearly a vital issue for patentees, in the context of partitioned exclusive rights in an exclusive licence, the ability to licence the partitioned element to other parties is voluntarily foregone by the patentee when the licence is struck. Thus, this interest is accounted for too.

This analysis of interests protected by standing law, by itself, suggests that partitioned exclusive licensees should be able to initiate patent infringement actions, but it does not necessarily conclude the issue. This is especially so when it is considered that patentees control remaining patent rights, have an interest in reversionary rights, have standing, and could enforce patent rights on behalf of licensees. However, there are other reasons, legal, economic, and practical, that support partitioned exclusive licensee standing.

The patent system is in part justified by its ability to efficiently allocate prospective resources.<sup>98</sup> What this means in practise is that the award of patent rights allocates to the patentee the exclusive ability to commercialise the invention. In turn, these exclusive rights are designed to help the inventor recoup costs expended in its development and commercialisation.<sup>99</sup> Connected to these exclusive rights is the ability to enforce them, since without enforcement the resource allocated is significantly diminished.<sup>100</sup> This reasoning flows through to partitioned exclusive licensees in two ways. First, if a partitioned exclusive licensee cannot enforce rights it has bargained for, then the value of the right is reduced and the licensee will pay less for the right. Second, it is logical that a party who is exclusively permitted to practise a partitioned element of a patented invention can choose how and when to enforce it, because they are the party actually capitalising on the invention. It is helpful to illustrate this reasoning with a practical example.

Division of labour in exploiting patent rights means that, in some instances, for a patentee to realise its greatest advantage from a patent, it will need to create exclusive licences. For example, one party may have well-established distribution channels in a geographic area, or a party may have developed goodwill in a specific field, and it is more efficient for a party in those positions to practise the invention. Indeed, in Australia, geographic exclusive licences are often suited to purpose, as the layout of the country includes economically valuable areas separated by geographic boundaries, for

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<sup>98</sup> Joshua S Gans, Philip L Williams, and David Briggs, 'Intellectual Property Rights: A Grant of Monopoly or an Aid to Competition?' (2004) 37 *The Australian Economic Review* 436, 437–8; William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 13, 20, 294–9; Merges, Menell and Lemley, *Intellectual Property in the New Technological Age* (Aspen Publishers, 6<sup>th</sup> ed, 2012) 11–3; Edmund W Kitch, 'The Nature and Function of the Patent System' (1977) 20 *Journal of Law and Economics* 265, 266.

<sup>99</sup> Joshua S Gans, Philip L Williams, and David Briggs, 'Intellectual Property Rights: A Grant of Monopoly or an Aid to Competition?' (2004) 37 *The Australian Economic Review* 436, 437–8; William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 294–7 cf. 326–32; Merges, Menell and Lemley, *Intellectual Property in the New Technological Age* (Aspen Publishers, 6<sup>th</sup> ed, 2012) 11–3.

<sup>100</sup> Joshua S Gans, Philip L Williams, and David Briggs, 'Intellectual Property Rights: A Grant of Monopoly or an Aid to Competition?' (2004) 37 *The Australian Economic Review* 436, 437–9; Merges, Menell and Lemley, *Intellectual Property in the New Technological Age* (Aspen Publishers, 6<sup>th</sup> ed, 2012) 11–3.

example, deserts, bodies of water or large distances.<sup>101</sup> If infringement occurs within the geographic area of a partitioned exclusive licensee, they will be in the best position to judge whether to ignore the infringing act, or choose to take other action, including threatening litigation. In contrast to the patentee, the licensee will normally have a much better understanding of the market, its players, and, quite often, the extent to which the threat of litigation will operate as a bargaining chip in negotiation. However, if a geographic exclusive licensee must co-ordinate infringement concerns through the patentee, they incur additional transaction costs and risk a situation where they may not be able to enforce their rights.

## B. Related Legal Aspects

Although enabling efficient exploitation of partitioned patent rights is one element of standing, there are two further legal aspects. The first concerns applications for relief from unjustified threats of infringement proceedings. These applications allow a person who is unjustifiably threatened with infringement proceedings to recover any damages caused by them.<sup>102</sup> This is relevant because obiter statements from the High Court suggest that threats of litigation by a licensee without standing would constitute unjustified threats.<sup>103</sup> It follows, then, that if the threat of litigation is to operate as a bargaining chip in negotiations between partitioned exclusive licensees and infringers, or potential infringers, this end will only be achieved if they are legally allowed to make such threats. Otherwise, partitioned exclusive licensees will expose themselves to paying for the damage the threat causes.<sup>104</sup>

The second legal ramification of current standing law is that it can unfairly curtail damages awards. To explain how this reduction occurs, it is necessary to briefly outline how licensees can use patentee's names to litigate patents. In the UK government report leading to the *Patents Act 1949* (UK),<sup>105</sup> the 'Swan Report',<sup>106</sup> the Board of Trade noted that exclusive licences commonly include clauses to enable licensees to conduct infringement actions in the name of the patentee (at the time the Act only permitted patentees to initiate infringement actions).<sup>107</sup> This could result in reduced damages because if patent infringement is proved, the successful litigants have a choice between an account of profits and damages.<sup>108</sup> Moreover, while an account of profits calculation is the same regardless of whose name the litigation is conducted under, a damages calculation is based on the harm done to the successful litigant.<sup>109</sup> This means that, depending on the licence agreement, a

<sup>101</sup> It is interesting to note here that current Australian patent law specifically allows assignments in geographic areas, see *Patents Act 1990* (Cth) s 14(2).

<sup>102</sup> *Ibid* s 14(2), ch 11 pt 3.

<sup>103</sup> *Avel Pty Ltd v Multicoins Amusements Pty Ltd* (1990) 171 CLR 88, 94 (Mason CJ, Deane and Gaudron JJ), 105 (Dawson J).

<sup>104</sup> *Patents Act 1990* (Cth) s 128(3).

<sup>105</sup> *Patents Act 1949*, 12, 13 & 14 Geo 6, c 87.

<sup>106</sup> Board of Trade, *Patents and Designs Acts: Final Report of the Department Committee*, Cmd 7206 (1947).

<sup>107</sup> *Ibid* 29.

<sup>108</sup> *Patents Act 1990* (Cth) s 122(1).

<sup>109</sup> *Colbeam Palmer Ltd v Stock Affiliates Pty Ltd* (1968) 122 CLR 25, 32.

damages award might be relatively low, even though the actual damage to the licensee is much higher. This could arise, for example, under a scenario of lump sum payments paid to the patentee that are not connected to sales of the invention, or when a patentee company creates a partitioned exclusive licence with a subsidiary company in exchange for nominal consideration.

### C. Arguments Against Standing for Partitioned Exclusive Licensees

An argument against standing for partitioned exclusive licensees is that, in theory, it allows more than two parties to initiate infringement actions. This could be problematic for a number of reasons, including what happens if one or more parties do not want to initiate a suit, or, if the infringement action is successful, how relief is distributed. However, while these issues may be more complex because more than two parties are involved, they are no different than when a panoplied exclusive licence is established. Whether there is only one exclusive licensee and a patentee, or multiple exclusive licensees and a patentee, forethought is required on how litigation may be conducted and how financial relief should be distributed.

Related to the negotiation of licences are also various practical business considerations that operate against large numbers of partitioned exclusive licensees. From the point of view of a patentee, dividing patent rights increases negotiation and other transaction costs and, for licensees, efficient and efficacious exploitation will often overlap with the ability to utilise a significant proportion of rights conferred in a patent. For example, manufacturers will often be sellers, and will want to distribute across the entire patent area and in all fields-of-use. Notably, as explored further below, partitioned exclusive licensees can initiate infringement proceedings in the US and UK, and no commentary has specifically attributed problems to them doing so.<sup>110</sup>

A more general concern with patent law is that patent rights may be used for outcomes which undermine its aim as a welfare enhancing tool. The conduct of various patent assertion entities, or to use the pejorative term, ‘trolls’, is an ongoing issue.<sup>111</sup> Arguably, by limiting enforcement of patents to panoplied exclusive licensees, some undesirable conduct may be avoided. However, limiting behaviour by confining enforcement to certain types of exclusive licensees is a blunt means to achieve such ends, especially when ‘troll’ litigation has not been linked to partitioned exclusive licences.

<sup>110</sup> As explored in pt II A below, in the US there is currently a level of confusion associated with standing in patent law.

However, this is directed to when exclusive licensees can initiate infringement proceedings without the patentee - this is something that is not permitted under the *Patents Act* and not investigated in this paper. Despite this, as a general rule, in the US partitioned exclusive licensees can initiate infringement proceedings with patentees named as co-plaintiffs, and no problems have been specifically attributed to it.

<sup>111</sup> See, eg, James Bessen and Michael J Meurer, ‘The Direct Costs from NPE Disputes’ (Boston University School of Law Working Paper No. 12-34, 28 June 2012) 24–5.



The analysis so far has not distinguished between different types of partitioned exclusive licences and, generally speaking, most reasoning concerning partitioned exclusive licences applies equally to all three. However, a semantic difference between action exclusive licences and the other two partitioned exclusive licences is that action exclusive licences wholly allocate separate activities under the definition of 'exploit', whereas the other two subdivide the activities. What is meant by this is that, if a geographic exclusive licence is established in each state of Australia, six parties have the ability to sell, import, offer for sale etc, the patented invention. With multiple action exclusive licences, only one party may have the ability to either sell, make, or import etc, the invention. It follows that there is legal simplicity to prohibiting geographic or field-of-use exclusive licensees from having standing because they 'share' an activity, or prohibiting action exclusive licensees from having standing because they cannot perform all the activities under the definition of 'exploit'. However, there are three arguments that run against both of these propositions.

First, patent rights have always been able to be split. Like other forms of personal property,<sup>112</sup> patents can be granted to more than one party and they can be assigned in moieties, either as tenants-in-common or in joint tenancy.<sup>113</sup> Unless there is a reason to distinguish between the rights of owners and partitioned exclusive licensees at standing, this distinction is unwarranted. Second, from the economic justification described above, the incentive rationale for patents is based on exclusivity. In Australia, the activities described in the definition of 'exploit' are only 'examples' of what the word means - they are not rights.<sup>114</sup> Thus, focusing on whether a party or parties control an activity that is not a right in itself, just an example of what 'exploit' means, is artificial and has a limited logical connection to the justifications for patent rights.

Third, in relation to field-of-use exclusive licences, a single patent often consists of different applications for the same invention. For example, a single patent to artificial DNA could include claims for use of the DNA in human diagnostics, scientific experiments, and human therapeutics. Under the current operation of Australian patent law, partitioned exclusive licences to each specific field listed would not carry standing. However, as separate claims must each satisfy the requirements for grant, when applying for patent protection the applicant could have separated the different claims into three separate applications. The benefit to the patentee in these circumstances would be that they could create panoplied exclusive licences to each patent. Thus, preventing patentees from creating multiple partitioned exclusive licences that carry standing is somewhat artificial, since they could in theory be panoplied exclusive licences to three separate patents. Indeed, the single patent scenario is preferable, because it reduces work for examiners, saves the patentee money, and does

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<sup>112</sup> *Patents Act 1990* (Cth) s 13(2).

<sup>113</sup> *Ibid* s 16; *Walton v Lavater* (1860) 141 ER 1127, 1132–3 (Erle CJ).

<sup>114</sup> *Bristol-Myers Squibb Co v Apotex Pty Ltd (No 5)* (2013) 104 IPR 23, 106; *Bristol-Myers Squibb Co v Apotex Pty Ltd* (2015) 228 FCR 1, 33.

not require patentees to make significant commercialisation decisions before commencing the application process.

#### D. Summary on Jurisprudence & Justifications

A related issue with any type of purported exclusive licence is that it may not actually be exclusive. By this, it is meant that the licensee cannot exclude all other parties because they have separate permission to practise the invention from the patentee. In circumstances of multiple field-of-use exclusive licences that emanate from the same patent, this may be particularly problematic. This can be demonstrated using the simplistic example of commercialising an artificial DNA patent described above. When purportedly exclusive field-of-use licences are drafted to each area, that is, human diagnostics, scientific equipment, and human therapy, it is quite possible that they could be interpreted to have overlapping interests. For example, a genetic diagnostic test may also be useful to optimise human therapy. It is beyond the scope of this chapter to canvas drafting techniques to ensure exclusivity or critique contractual interpretation in this area, but the broader issue of exclusivity is a problem. To this extent, following the conclusions reached above, the test for exclusivity that should be necessary for a party to have standing is whether they have an interest amounting to an exclusive sphere within the concept of 'exploit'.

The examination of partitioned exclusive licences in this part suggests that there are no aspects of them that undermine Blaire and Cotter's three assumptions. Of particular note, no economic, legal or business related rationale undermines the third assumption that patent rights should not have their value diminished based on the way they are transferred. The foregoing analysis also suggests that where a licensee is permitted to exclusively exercise an invention but is not permitted to enforce it in their own name devalues the exclusivity that can be bargained for and therefore the value of the patent. Permitting partitioned exclusive licensees to enforce patents gives them the opportunity to choose how to exploit resources in a market economy. At its core, this type of explanation supports the resource allocation justifications underpinning patent law. Unnecessary restrictions on the ability to enforce patent rights creates additional transaction costs and unnecessary hurdles for licensees, and may prevent licensees and patentees from capturing the benefits the patent system is designed to confer.

From this economic point of view, what this inquiry also reveals is that focusing on how a given statute defines 'exclusive licensee' or 'patent area' is irrelevant when determining standing, and distracts from the real question of what is the correct level of legal interest that should confer standing. The real and substantial question is whether a party exclusively exercises a sphere of patent rights. By corollary this analysis also suggests that standing to initiate infringement actions in

Australian patent law is currently flawed. The next part of this chapter examines whether this flaw is common to other jurisdictions or unique to Australia.

### III. Foreign Comparisons

#### A. US

Standing to initiate patent infringement suits in the US is dictated by what is known as ‘prudential standing’.<sup>115</sup> In a way, it is more dynamic than patent standing law in Australia because it can permit exclusive licensees to begin litigation without the patentee being added to the action if they control ‘all substantial rights’ in a patent and are found to be equivalent to an assignee.<sup>116</sup> It also confers standing on exclusive licensees when they control less than ‘all substantial rights’, provided remaining substantial rights are represented in the suit, which is usually achieved by adding the patentee.<sup>117</sup> Despite its wide operation, it has recently been described by a number of commentators as ‘contradictory’, ‘confusing’, ‘discretionary’, and ‘incoherent’.<sup>118</sup> However, these descriptors are specifically targeted towards the use of prudential standing in circumstances where a licensee can sue by themselves.<sup>119</sup> Related to this issue, in *Alfred E Mann Foundation for Scientific Research v Cochlear Corp*,<sup>120</sup> the Federal Circuit non-exhaustively listed nine different elements of a licence that need to be considered when evaluating whether the licensee has ‘all the substantial rights’.<sup>121</sup> It is not the point of this chapter to offer a perspective on this issue, although it is noted that commentators have suggested reform is needed.<sup>122</sup> Rather, on point with the enquiry in this chapter, it can be observed from the morass of case law that partitioned exclusive licensees do have standing if the patentee is joined in the suit.

The statutory basis in the US for standing to initiate infringement proceedings is that a ‘patentee shall have remedy by civil action for infringement of his patent’.<sup>123</sup> Patentee is then defined to include ‘not only the patentee to whom the patent was issued but also the successors in title to the

<sup>115</sup> Cf. ‘Constitutional standing’, see, *Intellectual Property Developers Inc v TCI Cablevision of California Inc*, 248 F 3d 1333, 1348 (Fed Cir, 2001); *Totes-Isotoner Corp v United States*, 594 F 3d 1346, 1352 (Fed Cir, 2010); *Lujan v Defenders of Wildlife*, 504 US 555, 560–61 (1992).

<sup>116</sup> *Prima Tek II LLC v A-Roo Co*, 222 F 3d 1372, 1377 (Fed Cir, 2000); *Alfred E Mann Foundation for Scientific Research v Cochlear Corp*, 604 F 3d 1354, 1358–9 (Fed Cir, 2010).

<sup>117</sup> *Prima Tek II LLC v A-Roo Co*, 222 F 3d 1372, 1377 (Fed Cir, 2000); *Alfred E Mann Foundation for Scientific Research v Cochlear Corp*, 604 F 3d 1354, 1359 (Fed Cir, 2010); *Intellectual Property Developers Inc v TCI Cablevision of California Inc*, 248 F 3d 1333, 1346–7 (Fed Cir, 2001).

<sup>118</sup> Timothy Denny Greene, ‘“All Substantial Rights”: Toward Sensible Patent Licensee Standing’ (2012–2013) 22 *Federal Circuit Bar Journal* 1, 1–5; Xuan-Thao Nguyen, ‘Patent Prudential Standing’ (2013–2014) 21 *George Mason Law Review* 17, 20–1, 28–9.

<sup>119</sup> Timothy Denny Greene, ‘“All Substantial Rights”: Toward Sensible Patent Licensee Standing’ (2012–2013) 22 *Federal Circuit Bar Journal* 1; Xuan-Thao Nguyen, ‘Patent Prudential Standing’ (2013–2014) 21 *George Mason Law Review* 17.

<sup>120</sup> *Alfred E Mann Foundation for Scientific Research v Cochlear Corp*, 604 F 3d 1354 (Fed Cir, 2010).

<sup>121</sup> *Ibid* 1360–1.

<sup>122</sup> See generally, Timothy Denny Greene, ‘“All Substantial Rights”: Toward Sensible Patent Licensee Standing’ (2012–2013) 22 *Federal Circuit Bar Journal* 1; Xuan-Thao Nguyen, ‘Patent Prudential Standing’ (2013–2014) 21 *George Mason Law Review* 17.

<sup>123</sup> 35 USC § 281.

patentee'.<sup>124</sup> No reference is made to exclusive licensees. With regard to exclusive rights, US patent law confers the ability to make, use, sell (or offer to sell), or import the invention in the US.<sup>125</sup>

In the 1926 Supreme Court case of *Independent Wireless Telegraph Co v Radio Corp of America*,<sup>126</sup> the unanimous Court found that an exclusive licensee who controlled less than the panoply of exclusive rights had standing to initiate an infringement action.<sup>127</sup> How this outcome was achieved though, was quite different to reasoning in Australian law. The patent in question was to 'devices for amplifying feeble electric currents and certain new and useful improvements in space telegraphy'.<sup>128</sup> The licensee was granted the exclusive right to use and sell the invention, but not make it.<sup>129</sup> Moreover, the licensee was only granted these rights with regard to 'radio purposes',<sup>130</sup> when the invention itself could be put to a range of other uses, most notably for telephony.<sup>131</sup> At the time, it was not clear how and when exclusive licensees could initiate infringement actions. Accordingly, much of the reasoning in *Independent Wireless Telegraph Co v Radio Corp of America* concerned how and when exclusive licensees could use a patentee's name to enforce a patent or when they could use their own. This last point was of particular importance because the patentee in this case was not available.<sup>132</sup> Interestingly, the approach adopted by the Supreme Court was in part based on the law of trusts.<sup>133</sup> Relevantly, their Honours stated that:

It seems clear then on principle and authority that the owner of a patent who grants to another the exclusive right to make, use or vend the invention, which does not constitute a statutory assignment, holds the title to the patent in trust for such a licensee, to the extent that he must allow the use of his name as plaintiff in any action brought at the instance of the licensee in law or in equity to obtain damages for the injury to this exclusive right by an infringer or to enjoin infringement of it.<sup>134</sup>

Continuing this reasoning, the Court found that in absence of the patentee, equity allowed the exclusive licensee to use their own name and join the patentee without their consent.

In the intervening time, relatively well articulated rules for exclusive licensee standing have developed.<sup>135</sup> In *Amgen Inc v Chugai Pharmaceutical Co Ltd*,<sup>136</sup> after reviewing case law Young J stated, '[a] licensee can be deemed exclusive ... where the licensee has obtained only the exclusive

<sup>124</sup> 35 USC § 100(d). For conditions on assignments, see 35 USC § 261.

<sup>125</sup> 35 USC § 154(a)(1).

<sup>126</sup> *Independent Wireless Telegraph Co v Radio Corp of America*, 269 US 459, 461–464, (1926).

<sup>127</sup> *Ibid* 475.

<sup>128</sup> *Ibid* 461.

<sup>129</sup> *Ibid*.

<sup>130</sup> *Ibid*.

<sup>131</sup> US Patent 841,387.

<sup>132</sup> *Independent Wireless Telegraph Co v Radio Corp of America*, 269 US 459, 472 (1926).

<sup>133</sup> See generally, *ibid*.

<sup>134</sup> *Ibid* 469.

<sup>135</sup> Roger D Blair and Thomas F Cotter, 'The Elusive Logic of Standing Doctrine in Intellectual Property Law' (1999–2000) 74 *Tulane Law Review* 1323, 1347–50.

<sup>136</sup> *Amgen Inc v Chugai Pharmaceutical Co Ltd*, 808 F Supp 894 (D Mass, 1992).

right to *sell* the patented invention’ and more generally that, ‘an exclusive license can be created by a grant of exclusivity based solely on geographic, time or field-of-use limitations.’<sup>137</sup> This reasoning was reviewed on appeal in *Ortho Pharmaceutical Corp v Genetics Institute*<sup>138</sup> where it was unanimously affirmed.<sup>139</sup> Nies J, writing for the Court, expanded on the rationale first expounded by Justice Hand in *A L Smith Iron Co v Dickson* (extracted above), stating:

To have co-plaintiff standing in an infringement suit, a licensee must hold some of the proprietary sticks from the bundle of patent rights, albeit a lesser share of rights in the patent than for an assignment and standing to sue alone... The proprietary rights granted by any patent are the rights to exclude others from making, using or selling the invention in the United States. A patent license may have the effect between the parties to the license of transferring some of those proprietary rights from the patentee to its licensee. Such license then does more than provide a covenant not to sue, *i.e.*, a ‘bare’ license. In addition, the license makes the licensee a beneficial owner of some identifiable part of the patentee's bundle of rights to exclude others. Thus, a licensee with proprietary rights in the patent is generally called an ‘exclusive’ licensee. But it is the licensee's beneficial ownership of a right to prevent others from making, using or selling the patented technology that provides the foundation for co-plaintiff standing...<sup>140</sup>

From this commentary it is relatively clear that US patent law recognises standing for partitioned exclusive licensees.<sup>141</sup> It is also interesting to note that the reasoning of the Federal Circuit in *Ortho Pharmaceutical Corp v Genetics Institute* resonates with the economic justifications for standing elucidated above, albeit, as the extracts indicate, more from a property theory and trust law point of view.

## B. UK

In the 1956 UK case, *Re Courtaulds Ltd's Application for Extension of the Term of Letters Patent No 511,160* (*'Courtaulds Application'*),<sup>142</sup> Lloyd-Jacob J commented that the definition of ‘exclusive licensee’ in the *Patents Act 1949* (UK), ‘would permit a plurality of exclusive licensees to be created in respect of any one patent monopoly’.<sup>143</sup> Since the *Patents Act 1949* (UK) specified that exclusive licensees could initiate infringement suits,<sup>144</sup> this suggests that partitioned exclusive licensees had standing to initiate infringement proceedings. However, *Courtaulds Application* was not decided on whether a partitioned exclusive licensee had standing, but whether the applicants were actually in

<sup>137</sup> Ibid 900.

<sup>138</sup> *Ortho Pharmaceutical Corp v Genetics Institute Inc*, 52 F 3d 1026, 1033–4 (Fed Cir, 1995).

<sup>139</sup> Ibid.

<sup>140</sup> *Ortho Pharmaceutical Corp v Genetics Institute Inc*, 52 F 3d 1026, 1031–2 (Fed Cir, 1995); an appeal to the Supreme Court was denied, see, *Ortho Pharmaceutical Corp v Genetics Institute Inc*, 516 US 907 (1995).

<sup>141</sup> See also, Roger D Blair and Thomas F Cotter, ‘The Elusive Logic of Standing Doctrine in Intellectual Property Law’ (1999–2000) 74 *Tulane Law Review* 1323, 1347.

<sup>142</sup> *Re Courtaulds Ltd's Application for Extension of the Term of the Letters Patent No 511,160* [1956] RPC 208.

<sup>143</sup> Ibid 210.

<sup>144</sup> *Patents Act 1949*, 12, 13 & 14 Geo 6, c 87, s 63(1).

possession of a licence.<sup>145</sup> Since Lloyd-Jacob J's found the applicants were not in possession of a licence,<sup>146</sup> his Honour's comments are therefore obiter.

Nevertheless, there are two additional elements that make Lloyd-Jacob J's interpretation uncontroversial. First, the Board of Trade in the *Swan Report* specifically stated that the definition of exclusive licensee is to include 'any person who has the sole and exclusive right to work the invention in any particular field of its application or in any particular geographical area'.<sup>147</sup> Further, the report stated that, 'an exclusive licensee... has been promised immunity from... [otherwise] legitimate competition as would spring from the grant of additional licences. He is plainly entitled, therefore, to demand protection against illegitimate competition of infringers.'<sup>148</sup> Second, the *Patents Act 1949* (UK) defined exclusive licensee to mean, 'a licence from a patentee which confers on the licensee, or on the licensee and persons authorised by him, to the exclusion of all other persons (including the patentee), any right in respect of the patented invention, and "exclusive licensee" shall be construed accordingly.'<sup>149</sup> In this passage, the phrase 'any right in respect of the patented invention' suggests multiplicity.

Under the *Patents Act 1977* (UK),<sup>150</sup> standing to initiate patent infringement proceedings is now specified in ss 61(1) and 67(1). Section 61(1) specifies that 'civil proceedings may be brought in the court by the proprietor of a patent ...'<sup>151</sup> and s 67(1) specifies that 'the holder of an exclusive licence under a patent shall have the same right as the proprietor of the patent to bring proceedings in respect of any infringement of the patent committed after the date of the licence'.<sup>152</sup> Relevantly, 'exclusive licensee' is defined to mean:

a licence from the proprietor of or applicant for a patent conferring on the licensee, or on him and persons authorised by him, to the exclusion of all other persons (including the proprietor or applicant), any right in respect of the invention to which the patent or application relates, and 'exclusive licensee' and 'non-exclusive licence' shall be construed accordingly.<sup>153</sup>

The passage, 'any right in respect of the invention to which the patent or application relates', echoes the earlier definition.

In cases under the new Act, none have cited the *Swan Report* or *Courtaulds Application*. Nevertheless, the law appears to operate in the same way. In *Dendron GmbH v University of*

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<sup>145</sup> Ibid.

<sup>146</sup> Ibid.

<sup>147</sup> Board of Trade, *Patents and Designs Acts: Final Report of the Department Committee*, Cmd 7206 (1947) 30.

<sup>148</sup> Ibid.

<sup>149</sup> *Patents Act 1949*, 12, 13 & 14 Geo 6, c 87, s 101 (definition of 'exclusive licensee') (emphasis added).

<sup>150</sup> *Patents Act 1977* (UK) c 37.

<sup>151</sup> Ibid s 61(1).

<sup>152</sup> Ibid s 67(1).

<sup>153</sup> Ibid s 130.

*California (No 3)*,<sup>154</sup> the claimant applied to have a party added to an infringement/revocation action on the basis that they were an 'exclusive licensee'.<sup>155</sup> The claimant wanted to add the party to the action for the purpose of obtaining discovery from them.<sup>156</sup> In the course of his Honour's decision, Pumfrey J stated that 'separate exclusive licences can, to all appearances, be granted in respect of distinct rights under a patent. Thus for example it seems clear that separate exclusive licences may be granted to manufacture and to import a patented product.'<sup>157</sup> However, this case was not decided on whether the third party was a type of exclusive licensee and should therefore be added to the action. Rather, it was on whether the party actually exclusively controlled any patent rights.<sup>158</sup> Since, Pumfrey J's found the party in question did not exercise any exclusive rights,<sup>159</sup> his Honour's comments on partitioned licensee standing are obiter too. Nevertheless, from the analysis presented here, a consistent line of reasoning indicating that partitioned exclusive licensees do have standing under the UK Act does exist.<sup>160</sup>

### C. Summary on US and UK Standing Law

The examination of US and UK standing law provided in this part demonstrates that both patent regimes confer, or are likely to confer, standing on partitioned exclusive licensees. In of itself, this outcome weighs in favour of broadening Australian standing law to include partitioned exclusive licensees, however, it also has more specific outcomes for patent harmonisation. A central goal of harmonisation is to reduce patent related costs by making consistent laws between countries.<sup>161</sup> In this context, there are a number of costs associated with partitioned exclusive licensees not having standing, all which can be demonstrated in the example of a company that manufactures a patented product in one jurisdiction and uses action exclusive licensees to import and sell the product in others. In jurisdictions that do not grant standing to partitioned exclusive licensees, licensees may encounter additional transaction costs associated with enforcement in the patentee's name, including a reduced amount of damages, or prohibition from enforcing the patent. In addition, costs in the global exploitation of patents will be increased by requiring legal advice on an issue that, as demonstrated above, has no compelling reason for its existence.

<sup>154</sup> *Dendron GmbH v University of California (No 3)* [2004] FSR 43.

<sup>155</sup> *Ibid* [1].

<sup>156</sup> *Ibid*.

<sup>157</sup> *Ibid* [25].

<sup>158</sup> *Ibid* [23]–[26].

<sup>159</sup> *Ibid*.

<sup>160</sup> See also, *Bondax Carpets Ltd v Advance Carpet Tiles* [1993] FSR 162; *SDL Hair Ltd v Next Row Ltd* [2013] EWPCC 31 (14 June 2013); *PCUK v Diamond Shamrock Industrial Chemical Ltd* [1981] FSR 427.

<sup>161</sup> B+ Sub-Group, 'Objectives and Principles, with Commentary on Potential Outcomes' (Group B+ Sub-Group on Patent Harmonisation, 27 May 2015) 2; Jeremy Phillips, *Harmonious Global Patent Harmonisation? B+ Subgroup Asks for Comments* (17 June 2015) IPKat <<http://ipkitten.blogspot.com.au/2015/06/harmonious-global-patent-harmonisation.html>>.

## Conclusion

The legal and economic reasoning presented in this chapter provides significant support for patent law providing standing to partitioned exclusive licensees. In particular, the ability for partitioned exclusive licensees to choose how and when infringement is initiated aligns with the patent regime's role in incentivising innovation and complements the role of patents in a market economy. Conferring standing on partitioned exclusive licensees would also harmonise Australian law with key trading partners. This position, however, is the diametric opposite of Australia's current patent standing laws. It is possible that a future High Court decision could establish that partitioned exclusive licensees do have standing under the current wording of the *Patents Act*. However, this seems to be a rather ineffective method to change the law. It is speculative, would take years, and would involve litigants risking much. Law reform by legislative means seems much more logical. Accordingly, it makes sense for IP Australia to move reform of standing law in the *Patents Act* up their agenda.



## Chapter 2

# Three Dimensions of Patent Infringement: Liability for Creation and Distribution of CAD Files<sup>1</sup>

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## Introduction

The first chapter of this thesis considered the threshold issue of standing to initiate patent infringement actions. The next four chapters, including this one, consider specific issues that test the boundaries of infringement causes of action in Australia. The emergent issue that forms the basis for this chapter is the growing use of 3D printers, in particular the creation and distribution of files that can instruct 3D printers to print physical objects. This chapter focuses on when creation and distribution of these files may give rise to ‘infringement by exploitation’ and ‘secondary infringement’.<sup>2</sup>

The use of 3D printers is expanding from esoteric areas of research and manufacturing into more mainstream applications.<sup>3</sup> For example, in the lead up to the 2014 Victorian election, the (then) Premier promised 3D printers for every government school if re-elected.<sup>4</sup> Despite this, many people are not familiar with the technology. 3D printing, also known as ‘additive manufacturing’,<sup>5</sup> is a process by which electronic data controls the co-ordination of a machine that creates objects by ‘printing’ successive layers of a material. The electronic data source is usually a type of computer-aided design (‘CAD’) file, which can be visualised on a computer screen like a blueprint.<sup>6</sup> The materials that can be printed include plastics, metals and even human cells.<sup>7</sup> Printers can now be bought that print more than one material,<sup>8</sup> and vary in size and complexity, from the simplest forms that fit on an office desk, to those that can print houses.<sup>9</sup>

There are various advantages and disadvantages to 3D printing technology. A key aspect of the technology is decentralisation.<sup>10</sup> Like the change from CDs to digital music files such as MP3s, the creation of CAD files that can instruct printers to make physical objects means that items which were

<sup>2</sup> As described in the Introduction to this thesis, these terms will be used throughout this study. See Introduction, pt V.

<sup>3</sup> Phil Reeves and Dinusha Mendis, ‘The Current Status and Impact of 3D Printing Within the Industrial Sector: An Analysis of Six Case Studies’ (United Kingdom Intellectual Property Office, March 2015) 2; Wohlers Associates Inc, ‘Additive Manufacturing: Technology Roadmap for Australia’ (Commonwealth Scientific and Industrial Research Organisation of Australia, March 2013) 8–13. The technology itself is not new: the first patent was granted in 1977 and the first commercial printer produced in 1988.

<sup>4</sup> Henrietta Cook, ‘Naphthine Promises 3D Printers for Every Government School’, *The Age* (online), 27 October 2014 <<http://www.theage.com.au/victoria/victoria-state-election-2014/naphthine-promises-3d-printers-for-every-government-school-20141026-11c9i2.html>>.

<sup>5</sup> The label ‘3D printing’ ‘is a term used to describe a range of digital manufacturing technologies ...’, see, Phil Reeves and Dinusha Mendis, ‘The Current Status and Impact of 3D Printing Within the Industrial Sector: An Analysis of Six Case Studies’ (United Kingdom Intellectual Property Office, March 2015) 1.

<sup>6</sup> A CAD file has been described as being the equivalent of the architectural blueprint for a building, or the sewing pattern for a dress, see, Stephanie M Santoso, Benjamin D Horne, and Stephen B Wicker, ‘Destroying by Creating: the Creative Destruction of 3D Printing Through Intellectual Property’ (Working paper, 2013) <[https://www.truststc.org/education/reu/13/Papers/HorneB\\_Paper.pdf](https://www.truststc.org/education/reu/13/Papers/HorneB_Paper.pdf)>.

<sup>7</sup> For eg, Sean V Murphy and Anothay Atala, ‘3D Bioprinting of Tissues and Organs’ (2014) 32(8) *Nature Biotechnology* 773.

<sup>8</sup> *Objet Connex 3D Printers*, Stratasys <<http://www.stratasys.com/3d-printers/design-series/objet-connex500>>.

<sup>9</sup> ‘3D Printer Builds Houses in China’, *The Guardian* (online), 29 April 2014 <<http://www.theguardian.com/technology/video/2014/apr/29/3d-printer-builds-houses-china-video>>.

<sup>10</sup> For more detailed discussion see, eg, Dinusha Mendis, ‘“The Clone Wars”: Episode 1 – The Ride of 3D Printing and its Implications for Intellectual Property Law – Learning Lessons From the Past?’ (2013) 35(3) *European Intellectual Property Review* 155, 157–159.

once only made in factories can now be made in homes, offices or laboratories.<sup>11</sup> In conjunction with this, the nature of digital CAD files means that they can be instantly shared. This decentralisation of manufacturing has broad implications for owners and users of subject matter protected by intellectual property ('IP') rights.<sup>12</sup> The concern that IP owners will lose control over IP-protected subject matter is a critical factor, invariably leading to questions about the adequacy of IP laws.<sup>13</sup> A number of commentators have already suggested that IP laws may not be well fitted to industries reliant on a manufacturing base that utilises 3D printing.<sup>14</sup>

One key question that warrants detailed doctrinal consideration is whether the unauthorised creation of CAD files relating to IP-protected subject matter constitutes infringement, particularly when CAD file creators share their files with other users. A future where patented products are widely printed by dispersed infringers and the only enforcement option is to pursue infringers individually, raises the possibility of unfeasible enforcement,<sup>15</sup> and in turn, may erode the economic incentive patents are designed to provide.<sup>16</sup> There has been some consideration of this issue in the context of US law, with specific focus on patent rights in physical subject matter. For example, Daniel Brean's analysis of relevant US patent law led him to conclude that 3D printing leaves patentees 'virtually helpless to combat a large class of infringement'.<sup>17</sup> This chapter explores whether the creation and distribution of CAD files could constitute infringement of patent rights in physical

<sup>11</sup> See generally, Dinusha Mendis, "'The Clone Wars': Episode 1 – The Rise of 3D Printing and its Implications for Intellectual Property Law – Learning Lessons From the Past?' (2013) 35(3) *European Intellectual Property Review* 155; Deven Desai and Gerard Magliocca, 'Patents, Meet Napster: 3D printing and the Digitisation of Things' (2014) 102 *Georgetown Law Journal* 1691.

<sup>12</sup> For a broader discussion see, John F Hornick, '3D Printing and the Future (or Demise) of Intellectual Property' (2014) 1(1) *3D Printing and Additive Manufacturing* 34, 35–36, 38–40.

<sup>13</sup> *Ibid.* The term 'IP disruption' is essentially used by Hornick to describe fundamental changes to the traditional IP protection model. In the same way that manufacturing processes will be disrupted by 3D printing technology, IP will arguably become increasingly irrelevant, see, *ibid* 35.

<sup>14</sup> See eg, Daniel Harris Brean, 'Asserting Patents To Combat Infringement via 3D Printing: It's No "Use"' (2013) 23 *Fordham Intellectual Property, Media & Entertainment Law Journal* 771; Deven Desai and Gerard Magliocca, 'Patents, Meet Napster: 3D printing and the Digitisation of Things' (2014) 102 *Georgetown Law Journal* 1691; Mark Lemley, 'IP in a World Without Scarcity' (Stanford Public Law Working Paper No 2413974, Stanford Law School, March 2014) [http://papers.ssrn.com/sol3/Delivery.cfm/SSRN\\_ID2456741\\_code32215.pdf?abstractid=2413974&mirid=4](http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2456741_code32215.pdf?abstractid=2413974&mirid=4); Davis Doherty, 'Downloading Infringement: Patent Law as a Roadblock to the 3D Printing Revolution' (2012) 26 *Harvard Journal of Law & Technology* 353; Michael Weinberg, *It Will Be Awesome If They Don't Screw It Up: 3d Printing, Intellectual Property, and the Fight Over the Next Great Disruptive Technology*, Public Knowledge (November 2010) <<http://publicknowledge.org/it-will-be-awesome-if-they-dont-screw-it-up>>; Dinusha Mendis, "'Clone Wars" Episode II – The Next Generation: The Copyright Implications Relating to 3D Printing and Computer-Aided Design (CAD) File' (2014) 6(2) *Law, Innovation and Technology* 265.

<sup>15</sup> Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 67.

<sup>16</sup> William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 12–3; Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 11–4; Merges, Menell and Lemley, *Intellectual Property in the New Technological Age* (Aspen Publishers, 6<sup>th</sup> ed, 2012) 11–3.

<sup>17</sup> Daniel Harris Brean, 'Asserting Patents To Combat Infringement via 3D Printing: It's No "Use"' (2013) 23 *Fordham Intellectual Property, Media & Entertainment Law Journal* 771, 804.

subject matter in the Australian context,<sup>18</sup> and contrasts the conclusions from this analysis with Brean's analysis of US law.

This chapter considers three dimensions of patent infringement as per the *Patents Act 1990* (Cth) ('the *Patents Act*'). It first explores whether infringement by exploitation is likely to be made out when CAD files that digitise patent-protected subject matter are created and distributed. This type of infringement is quite important because, particularly in the context of 3D printing, it affords broad protection. Thus, this chapter thoroughly explores the possibility of infringement by exploitation. Second, this chapter probes the applicability of the secondary infringement mechanisms: authorised infringement<sup>19</sup> and supply infringement.<sup>20</sup> In the course of this analysis, the chapter also discusses whether there is a need for patent law to be amended. Relevant amendments to copyright law have been effected in response to the unprecedented growth in unauthorised digital distribution of copyright material (such as music and movies). The aim of these amendments was to ensure that digital communication of copyright material constitutes direct infringement.<sup>21</sup> This chapter examines whether equivalent amendments in the patent law context are warranted.

The unique nature of 3D printing technology should not, however, be overlooked: fundamental differences between 3D printing and the distribution of digital copyright material raises questions as to whether 3D printing will have a similar disruptive impact.<sup>22</sup> Many 3D printing users have limited ability to generate CAD files that would produce an infringing version of a patented product, and the costs associated with 3D printing present a substantial barrier to infringement. To date there is no significant empirical evidence of widespread patent infringement wrought by 3D printing technology.<sup>23</sup> Nevertheless for those with the means to create CAD files, the technology presents significant capacity to infringe. It is this capacity that necessitates appraisal of these issues.

The implications of the analysis presented in this chapter are both academic and practical, and go beyond the specific concerns raised by 3D printing technology. Jurisprudentially, this analysis illustrates that there is a need for broader consideration of the nature of exclusive patent rights, particularly in the context of the developing information economy. On the practical side, it highlights differences in Australian and US infringement law, particularly in respect of secondary infringement.

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<sup>18</sup> The issue of copyright infringement is not considered here, but as noted above CAD files may also be subject to copyright protection. For analysis of this issue in the US context, see Matt Simon, 'When Copyright Can Kill: How 3D Printers are Breaking the Barriers between "Intellectual" Property and the Physical World' (2013) 3(1) *Pace Intellectual Property, Sports and Entertainment Law Forum* 59. For analysis in the UK context see, Dinusha Mendis, "'Clone Wars" Episode II – The Next Generation: The Copyright Implications Relating to 3D Printing and Computer-Aided Design (CAD) File' (2014) 6(2) *Law, Innovation and Technology* 265.

<sup>19</sup> *Patents Act 1990* (Cth) s 13(1).

<sup>20</sup> *Ibid* s 117(1).

<sup>21</sup> Explanatory Memorandum, Copyright Amendment (Digital Agenda) Bill 1999 (Cth) 2–3.

<sup>22</sup> Dinusha Mendis, Davide Secchi and Phil Reeves, 'A Legal and Empirical Study into the Intellectual Property Implications of 3D Printing' (United Kingdom Intellectual Property Office, March 2015) 8.

<sup>23</sup> *Ibid*.

In contrast with the analysis of US indirect patent infringement law presented by Brean, the reasoning in this chapter leads to a conclusion that Australian secondary patent infringement law is well equipped to provide relief in the context of CAD file distribution. The analysis also suggests that Australian secondary patent infringement law addresses many of the uncertainties, both legal and jurisprudential, that pose barriers to infringement by exploitation in the circumstances analysed. As such, the conclusion is that extending the law relating to infringement by exploitation, either through legislative amendment or judicial reasoning, is unwarranted and jurisprudentially unsound, and that it could lead to undesirable consequences.

## I. Infringement by Exploitation

The exclusive rights conferred by a US patent are to: make, use, sell (or offer to sell), or import an invention.<sup>24</sup> In contrast, as noted in the introduction to this thesis,<sup>25</sup> the unanimous Full Court of the Federal Court of Australia recently affirmed that the ‘twin’ exclusive rights conferred by Australian patents are to ‘exploit’ an invention and to authorise others to ‘exploit’ an invention.<sup>26</sup> Relevantly, the *Patents Act* states that ‘exploit’:

in relation to an invention, includes:

- (a) where the invention is a product--make, hire, sell or otherwise dispose of the product, offer to make, sell, hire or otherwise dispose of it, use or import it, or keep it for the purpose of doing any of those things; or
- (b) where the invention is a method or process--use the method or process or do any act mentioned in paragraph (a) in respect of a product resulting from such use.<sup>27</sup>

Consistent with this interpretation of Australian patent rights, any consideration of what is meant by ‘make’ or ‘use’, or any of the other activities listed under the definition of ‘exploit’, are indications of what is meant by the term ‘exploit’, but they are not exclusive rights in and of themselves.<sup>28</sup> In scenarios concerning the creation and distribution of CAD files, arguments concerning the activities of ‘make’, ‘sell’, ‘use’, and ‘otherwise dispose of’ are relevant.

### A. Make, & Offer to Make

In the US, the definition of ‘make’ has received judicial consideration by the Supreme Court. In *Bauer & Cie v O'Donnell*, the Court stated that it ‘embraces the construction of the thing invented’.<sup>29</sup> On

<sup>24</sup> 35 USC § 154(a)(1).

<sup>25</sup> See, Introduction, pt V.

<sup>26</sup> *Bristol-Myers Squibb Co v Apotex Pty Ltd* (2015) 228 FCR 1, 33 (Besanko, Jagot and Nicolas JJ); affirming *Bristol-Myers Squibb Co v Apotex Pty Ltd (No 5)* (2013) 104 IPR 23, 106 (Yates J).

<sup>27</sup> *Patents Act 1990* (1990) sch 1 (definition of ‘exploit’).

<sup>28</sup> *Bristol-Myers Squibb Co v Apotex Pty Ltd* (2015) 228 FCR 1, 33 (Besanko, Jagot and Nicolas JJ); affirming *Bristol-Myers Squibb Co v Apotex Pty Ltd (No 5)* (2013) 104 IPR 23, 106 (Yates J).

<sup>29</sup> *Bauer & Cie v O'Donnell*, 229 US 1, 10 (1913).

this basis, Brean argues that the exclusive right to ‘make’ is not encroached in the creation of a CAD file, because it does not involve construction of all of the integers of the invention.<sup>30</sup>

The starting point under Australian law for whether an invention is ‘made’ is that all the integers must be present in the allegedly infringing product.<sup>31</sup> In light of this requirement, a majority of Full Court of the Federal Court in *Bedford Industries Rehabilitation Association Inc v Pinefair Pty Ltd* (*‘Pinefair’*) held that an invention will be ‘made’ even if it is produced partway through the manufacturing process and is not in its ultimate commercial form.<sup>32</sup> This raises a question as to how far through the 3D printing process a product must be before it could be said to be ‘made’: is it necessary that a product is actually printed, or would the creation of a CAD file suffice? In support of an argument for infringement here, the High Court has held that the function of a patent right is to operate as a negative right that can be used to exclude others from making intangible constructs of inventions.<sup>33</sup> However, whilst this is undeniably a function of patent rights, the legal interpretation of ‘make’ is that it is limited to products containing all the integers of an invention.<sup>34</sup> If an invention is claimed using physical parameters, then those physical parameters *must* be reproduced. A non-physical representation does not reproduce physical integers.

Reflecting further on this requirement, since patent protection is available for software and software is non-physical, logic seems to dictate that dimensional consistency is inherent in the definition of ‘make’. In this sense, patent claims to non-physical property such as software can only be infringed when additional non-physical software is created. Likewise, patent claims to physical property can only be infringed when physical property is created. Such statements seem elementary, although perhaps infrequently appreciated in patent law. Further, when considered in relation to 3D printing the implications are enlightening. For example, just as printing software code on paper cannot constitute ‘making’ patented software, the creation of a CAD file cannot constitute ‘making’ a patented physical product. It is the act of printing the product based on the CAD file that would constitute the product being ‘made’.

<sup>30</sup> Daniel Brean, ‘Asserting Patent to Combat Infringement via 3D Printing: It’s No “Use”’ (2013) 23 *Fordham Intellectual Property, Media & Entertainment Law Journal* 771, 789–90.

<sup>31</sup> *Walker v Alemite Corp* (1933) 49 CLR 643, 657–8 (Dixon J); *Bedford Industries Rehabilitation Association Inc v Pinefair Pty Ltd* (1998) 87 FCR 458, 464 (Foster J); 469 (Mansfield J); 479–80 (Goldberg J).

<sup>32</sup> *Bedford Industries Rehabilitation Association Inc v Pinefair Pty Ltd* (1998) 87 FCR 458, 463–4 (Foster J); 469 (Mansfield J); cf. 479–80 (Goldberg J). In *Pinefair* the product, garden edging material, was ‘made’ during an intermediate, non-transitory manufacturing step, however the product was cut during final manufacturing stages meaning the final product did not infringe, see 461.

<sup>33</sup> *Victoria Park Racing & Recreation Grounds Co Ltd v Taylor* (1937) 58 CLR 479, 509 (Dixon J); *Grain Pool (WA) v The Commonwealth* (2000) 202 CLR 479, 513–14 (Gleeson CJ, Gaudron, McHugh, Gummow, Hayne and Callinan JJ); *JT International SA v Commonwealth of Australia* (2012) 250 CLR 1, 31 (French CJ).

<sup>34</sup> *Walker v Alemite Corp* (1933) 49 CLR 643, 657–8 (Dixon J); *Bedford Industries Rehabilitation Association Inc v Pinefair Pty Ltd* (1998) 87 FCR 458, 464 (Foster J); 469 (Mansfield J); 479–80 (Goldberg J).

This reasoning overlaps with similar concepts in copyright law. As a general rule, copyright material must be reproduced in the same dimension as the original.<sup>35</sup> For example, as stated by Pape J in the well-cited case of *Cuisenaire v Reed*,<sup>36</sup> ‘a set of written directions is not “reproduced” by the construction of an article made in accordance with those directions. A reproduction must reproduce the original’.<sup>37</sup> There are exceptions to this rule, for example, three-dimensional artistic works are protected from unauthorised two-dimensional reproduction;<sup>38</sup> and musical or dramatic works are protected from unauthorised reproduction in written form as well as through public performance.<sup>39</sup> Arguably though, these extensions stem from the necessity of achieving the core purpose of copyright: to incentivise creative expression. If artistic, musical and dramatic works are not protected from routine reproduction in these other dimensions, from a practical point of view there is insufficient incentive for creative expression. Whether it is necessary that distribution of CAD files constitute infringement by exploitation to ensure patents continue to incentivise innovation is a topic turned to later in this chapter.

The definition of ‘exploit’ also specifies the activity, ‘offer to make’. Consistent with the ‘offer’ element of this activity, it follows that to impinge upon this activity nothing need actually be made. This in itself demonstrates a type of extra-dimensional protection to ‘make’. Ostensibly, this opens the door to an argument that the offer to create a CAD file could be construed as an offer to make a patented physical product. However, since the creation of a CAD file is unlikely to constitute ‘making’ a patented invention, then an offer to create a CAD file is also unlikely to constitute ‘offering to make’ a patented invention.

#### B. Sell & ‘Otherwise Dispose of’

The exclusive right of ‘sell’ has not been interpreted by the US Supreme Court, but it has received scrutiny by the US Court of Appeals for the Federal Circuit. In 2005, the Court in *NTP Inc v Research in Motion Ltd*<sup>40</sup> concluded that it has two possible meanings: ‘1. The transfer of property or title for a price [and:] 2. The agreement by which such a transfer takes place.’<sup>41</sup> Based on *NTP Inc v Research in Motion Ltd* and a number of other Federal Circuit cases, Brean reasons that the sale of an unauthorised product can only infringe when the invention as described in the claims is to be

<sup>35</sup> See, eg, *Computer Edge Pty Ltd v Apple Computer Inc* (1968) 161 CLR 171, 186–7 (Gibbs CJ), 207 (Brennan J), 213–4 (Deane J).

<sup>36</sup> *Cuisenaire v Reed* [1963] VR 719.

<sup>37</sup> *Ibid* 735; applied in *Computer Edge Pty Ltd v Apple Computer Inc* (1968) 161 CLR 171, 186–7 (Gibbs CJ), 206–7 (Brennan J), 212–4 (Deane J).

<sup>38</sup> *Copyright Act 1968* (Cth) s 21(3).

<sup>39</sup> *Ibid* s 31(1).

<sup>40</sup> *NTP Inc v Research in Motion Ltd*, 418 F 3d 1282 (Fed Cir, 2005).

<sup>41</sup> *Ibid* 1319.

transferred.<sup>42</sup> Consequently, his reasoning leads to the conclusion that the sale of a CAD file depicting the invention cannot constitute infringement in the US.<sup>43</sup>

In Australia, the activities of 'sell' or 'otherwise dispose of' have not received detailed judicial interpretation. Nevertheless, case law under the *Patents Act 1952* (Cth) does appear to be on point. As outlined in the previous chapter,<sup>44</sup> under the *Patents Act 1952* (Cth), the exclusive rights conferred by a patent were to 'make, use, exercise and vend' the invention.<sup>45</sup> In *Windsurfing International Inc v Petit* ('*Windsurfing*'),<sup>46</sup> Waddell J found that the sale of a sailboard in a kit of parts was sufficient for infringement.<sup>47</sup> In reaching this conclusion, Waddell J reviewed several cases from Australia and the UK, in particular, *Walker v Alemite Corp* ('*Walker*'),<sup>48</sup> and *Townsend v Haworth* ('*Townsend*').<sup>49</sup>

The patent in *Walker* was for grease-cups that could be used to lubricate bearings that were difficult to access.<sup>50</sup> The invention consisted of three main components but the grease-cup was a key element and unique to the invention.<sup>51</sup> In this case, the patentee alleged that the sale of the grease-cup by itself constituted infringement because it would 'inevitably' be used for the purpose of infringing the patent.<sup>52</sup> All the members of the High Court found that the activity of selling grease-cups did not constitute infringement.<sup>53</sup> On this point, Dixon J stated, 'selling articles to persons to be used for the purpose of infringing a patent is not an infringement of the patent', and that 'sale with a knowledge that the purchaser will use the articles for infringement is not itself an infringement'.<sup>54</sup>

In *Townsend*, the invention was a method for preserving materials and fabrics from mildew by the application of commercially available chemicals.<sup>55</sup> The defendant supplied chemicals with the intention that they be used for such purposes.<sup>56</sup> On the issue of infringement Mellish J stated:

Selling materials for the purpose of infringing a patent to the man who is going to infringe it, even although the party who sells it knows that he is going to infringe it and indemnifies him, does not by itself make the person who so sells an infringer.<sup>57</sup>

<sup>42</sup> Daniel Brean, 'Asserting Patent to Combat Infringement via 3D Printing: It's No "Use"' (2013) 23 *Fordham Intellectual Property, Media & Entertainment Law Journal* 771, 790–3.

<sup>43</sup> *Ibid* 793.

<sup>44</sup> See, Chapter I pt I B.

<sup>45</sup> *Patents Act 1952* (Cth) s 69.

<sup>46</sup> *Windsurfing International Inc v Petit* [1984] 2 NSWLR 196.

<sup>47</sup> *Ibid* 207.

<sup>48</sup> *Walker v Alemite Corp* (1933) 49 CLR 643.

<sup>49</sup> *Townsend v Haworth* (1875) 12 ChD 831, fully reported in *Sykes v Howarth* (1879) 48 LJ(NS) 769, 770.

<sup>50</sup> *Walker v Alemite Corp* (1933) 49 CLR 643, 644–5.

<sup>51</sup> *Ibid* 644–5, 650–1, 657–8.

<sup>52</sup> *Ibid* 657–8.

<sup>53</sup> *Ibid* 650 (Rich J), 654 (Starke J), 657–8 (Dixon J), 658 (Evatt J agreeing with Stark J), 659 (McTiernan J agreeing with Dixon J).

<sup>54</sup> *Ibid* 658.

<sup>55</sup> *Townsend v Haworth* (1875) 12 ChD 831, fully reported in *Sykes v Howarth* (1879) 48 LJ(NS) 769, 773.

<sup>56</sup> *Ibid*.



A strict application of the reasoning in *Walker* and *Townsend* to the facts in *Windsurfing* tends to suggest that because the kit of unassembled parts does not take the integers of an invention, it cannot constitute infringement by exploitation; rather, this occurs later when the customer ‘makes’ it. Despite this, Waddell J distinguished both of these cases, although his Honour did not explicitly mention how.<sup>58</sup> It would appear that *Walker* was distinguished on the basis that the patent in that case claimed an apparatus with various integers, and the defendant only supplied one element of the apparatus.<sup>59</sup> With regard to *Townsend*, the chemicals that were supplied could be used in various ways, many of them non-infringing.<sup>60</sup> In contrast, the kit supplied in *Windsurfing* contained all the necessary elements, only had one purpose, and once the kit was constructed in accordance with the accompanying instructions, it contained all the integers of the claims.<sup>61</sup>

Waddell J also referred to two other cases.<sup>62</sup> His Honour approved of an obiter comment from Pearson J in *United Telephone Co v Dale*<sup>63</sup> (which had also been perfunctorily approved of by the English Court of Appeal<sup>64</sup>):

If there was a patent for a knife of a particular construction, and an injunction was granted restraining a defendant from selling knives made according to the patent, and he was to sell the component parts so that any school-boy could put them together and construct the knife, surely that sale would be a breach of the injunction.<sup>65</sup>

The other case Waddell J referred to was *EM Bowden’s Patents Syndicate Ltd v Wilson*.<sup>66</sup> In this case, Swinfen Eady J held that a defendant who sent components of a patented brake via mail that, when assembled, formed an infringing product, infringed the patent by sending the components.<sup>67</sup>

In finding infringement in *Windsurfing*, Waddell J emphasised that the kit form of the sailboard was the ordinary (and convenient) way for sale to take place and that it was a complete set of parts.<sup>68</sup> With the passage of time, his Honour’s judgment has been approved and applied by the Full Court of the Federal Court. In *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd*,<sup>69</sup> the unanimous Full Court approved it.<sup>70</sup> In *Grove Hill Pty Ltd v Great Western Corp Pty Ltd* (‘Grove’),<sup>71</sup>

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<sup>57</sup> Ibid.

<sup>58</sup> *Windsurfing International Inc v Petit* [1984] 2 NSWLR 196, 200.

<sup>59</sup> *Walker v Alemite Corp* (1933) 49 CLR 643, 658.

<sup>60</sup> *Townsend v Haworth* (1875) 12 ChD 831, fully reported in *Sykes v Howarth* (1879) 48 LJ(NS) 769, 771.

<sup>61</sup> *Windsurfing International Inc v Petit* [1984] 2 NSWLR 196, 214–5.

<sup>62</sup> Ibid 205–6.

<sup>63</sup> *United Telephone Co v Dale* (1884) 25 Ch D 778.

<sup>64</sup> *Dunlop Pneumatic Tyres Ltd v Moseley Ltd* [1904] 1 Ch 612, 619.

<sup>65</sup> *United Telephone Co v Dale* 25 (1884) 25 Ch D 778, 782–3.

<sup>66</sup> *EM Bowden’s Patents Syndicate Ltd v Wilson* (1903) 20 RPC 644.

<sup>67</sup> Ibid 648.

<sup>68</sup> *Windsurfing International Inc v Petit* [1984] 2 NSWLR 196, 207.

<sup>69</sup> *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239.

<sup>70</sup> Ibid 254 (Burchett, Sackville and Lehane JJ).

<sup>71</sup> *Grove Hill Pty Ltd v Great Western Corp Pty Ltd* (2002) 55 IPR 257.

Gyles J, with whom French and Dowsett JJ agreed,<sup>72</sup> applied it and found that the sale of a row cultivator (machinery for farming plants in rows) distributed in a kit, was sufficient for infringement by exploitation.<sup>73</sup>

Although an analogy between the sale of kits and the distribution of CAD files may at first appear tenuous, it does warrant further consideration. Assuming that a CAD file need only be opened in a computer program and a print instruction issued to a 3D printer in order to create a physical product (similar to downloading and printing an image), this process could be considered analogous to the infringing act in *Windsurfing*. Just as the kits for the sailboards in *Windsurfing* contained traditional paper instructions, the CAD file contains computer-readable instructions. No doubt the quality of the instructions differs, but from a human interaction perspective, 3D printing may require less intervention. Indeed, it is possible that the 3D printing process incorporates all the integers of an invention in a printed article with more certainty because there is no chance of the type of human error that is commonly associated with assembling kit products.

Nevertheless, this analogy is not perfect. In *Windsurfing*, Waddell J put weight on the fact that sailboards were sold in kits as the ordinary course of business. At the moment, it is not the usual course of business to send someone (for example a consumer) a CAD file to enable them to print a product. But, this may change in the future. The increasing use of 3D printers means that it is quite likely that the practice of printing products after paying to download CAD files may become commonplace.<sup>74</sup> Another more persuasive imperfection in the analogy with kits is that the supply of CAD files does not include the supply of the components needed to make the infringing product, most notably, the raw materials for printing and the printer itself. In *Windsurfing* (and *Grove*) all the components were supplied to the consumer, who could then put them together. From this perspective, then, supplying a CAD file is more aligned with the supply of the grease-cup in *Walker*. In both instances, although a key component is supplied, without more it does not provide the consumer with all of the necessary means to create an infringing product.

At its core, this emphasis on physical components seems to align more closely the jurisprudential underpinning of *Windsurfing* and *Grove*. That is, the cases represent an extension of reasoning consistent with the activity of ‘make’ and require that all the physical components of a patented invention be supplied and that they can be assembled through a straightforward process, or at least one that the receiver is capable of. It follows that supplying a CAD file alone is unlikely to constitute infringement via the activities of ‘sell’ or ‘otherwise dispose of’.

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<sup>72</sup> Ibid 288 (French J), 298–301 (Dowsett J).

<sup>73</sup> Ibid 341.

<sup>74</sup> Dinusha Mendis, ‘“The Clone Wars”: Episode 1 – The Rise of 3D Printing and its Implications for Intellectual Property Law – Learning Lessons From the Past?’ (2013) 35(3) *European Intellectual Property Review* 155, 168–69.

## C. 'Use'

On whether making a CAD file or distributing it online could constitute 'use',<sup>75</sup> the US Supreme Court has stated that 'use' 'is a comprehensive term and embraces within its meaning the right to put into service any given invention.'<sup>76</sup> Reviewing this case law, Brean concludes that making a CAD file or distributing it is, 'far removed from a physical product being put into service in accordance with the intended functions...'.<sup>77</sup> Thus, he concludes that an infringement action under this right is unlikely to succeed.<sup>78</sup>

The activity of 'use' has not been considered by the High Court of Australia, but it has been addressed by the Full Federal Court in *Pinefair*.<sup>79</sup> In that case, the patented product found to be infringed related to flexible garden edging material designed to retain soil in fixed areas.<sup>80</sup> In a split decision, Mansfield J and Foster J<sup>81</sup> approved von Doussa J's finding at first instance that 'use' can be constituted by 'taking commercial advantage of the invention to advance them in the market place, even though at the point of sale the [respondents'] product has been altered so that it no longer possesses all the integers of the claim'.<sup>82</sup> The majority found that the respondents produced the patented product during manufacturing, but additional alterations meant the market product did not include all the integers of the claims.<sup>83</sup> Although this meant the respondents did not sell an infringing product, since their production and use of the invention was more than just 'peripheral or transitory',<sup>84</sup> and gave them an advance in the market place, the majority found that this was sufficient to constitute 'use' for the purposes of infringement.<sup>85</sup>

By distributing a CAD file that provides instructions for printing a patented product, there is little doubt that the commercial value of the patent could be reduced. However, there is a point of difference between the infringing use in *Pinefair* and arguing that the creation and distribution of CAD files constitutes 'use'. Relevantly, in *Pinefair* the infringing article was 'made', and then, through additional manufacturing processes, 'used' to create a non-infringing article.<sup>86</sup> In the 3D printing scenario there is no intermediate 'making' of the invention, as analysed above, 'making' occurs later when the file is printed.<sup>87</sup> Thus, no direct analogy to *Pinefair* exists. Despite this finding, it is still

<sup>75</sup> Daniel Brean, 'Asserting Patent to Combat Infringement via 3D Printing: It's No "Use"' (2013) 23 *Fordham Intellectual Property, Media & Entertainment Law Journal* 771, 800.

<sup>76</sup> *Bauer & Cie v O'Donnell*, 229 US 1, 10 (1913).

<sup>77</sup> Daniel Brean, 'Asserting Patent to Combat Infringement via 3D Printing: It's No "Use"' (2013) 23 *Fordham Intellectual Property, Media & Entertainment Law Journal* 771, 803.

<sup>78</sup> *Ibid.*

<sup>79</sup> *Bedford Industries Rehabilitation Association Inc v Pinefair Pty Ltd* (1998) 87 FCR 458.

<sup>80</sup> *Ibid* 459–60; it is helpful to refer to diagrams in the patent, see, Australian Patent No 564,517.

<sup>81</sup> *Ibid* 463 (Foster J generally agreed with von Doussa's findings on this point), 469 (Mansfield J).

<sup>82</sup> *Bedford Industries Rehabilitation Association Inc v Pinefair Pty Ltd* (1998) 40 IPR 438, 450.

<sup>83</sup> *Bedford Industries Rehabilitation Association Inc v Pinefair Pty Ltd* (1998) 87 FCR 458, 463–4 (Foster J), 468 (Mansfield J).

<sup>84</sup> *Ibid* 463 (Foster J), 470 (Mansfield J).

<sup>85</sup> *Ibid* 463 (Foster J), 470–1 (Mansfield J).

<sup>86</sup> *Ibid* 463 (Foster J), 470 (Mansfield J).

<sup>87</sup> See above, pt I A.

relevant to enquire whether the distribution of a CAD file could constitute ‘use’, because other cases indicate the term may encompass other types of conduct.

Examining what ‘use’ means more broadly, commentators have suggested that it is limited to exercising the inventive element of a product.<sup>88</sup> However, recent judicial decisions do not appear to limit the term in such a way. On this point, the majority of the Full Federal Court in *Azuko Pty Ltd v Old Digger Pty Ltd* (‘Azuko’)<sup>89</sup> made obiter statements about the types of conduct that might be included in the definition of ‘use’. In *Azuko*, Gyles J, with whom Beaumont J agreed on this particular issue,<sup>90</sup> stated that ‘to sell goods might be seen as commercial use of the goods’.<sup>91</sup> Thus, ‘use’ appears to have a wider definition than purely exercising the inventive element of a product.

There is a line of cases on the definition of ‘use’ in the UK, beginning with *Saccharin Corp Ltd v Anglo-Continental Chemical Works Ltd* (‘Saccharin’),<sup>92</sup> which demonstrate that infringement can arise when a domestically patented process is performed in a foreign jurisdiction and then the products resulting from that process are imported domestically.<sup>93</sup> Although Australian patent law now specifies that infringement is constituted by importing and selling a product that is the result of using a patented process, UK legislation did not include an equivalent provision at that time.<sup>94</sup> In this case, the patentee controlled rights to a process for making a certain chemical, which could then be converted to saccharin (the commonly used artificial sweetener).<sup>95</sup> The process of making the intermediate chemical was a technical advance in the field and allowed saccharin to be made more efficiently.<sup>96</sup> In this case, the defendants imported saccharin from companies that made it overseas using the patented process.<sup>97</sup> One of the reasons described by the Court for arriving at a finding of infringement was that without protection in these circumstances, the value of the patent would be reduced because third parties would be able to perform the process in a foreign jurisdiction (without patent protection), and then import and sell the benefits of it domestically.<sup>98</sup> This case is relevant to distribution of CAD files because, by recognising infringement when a product is imported that is the result of using a domestically patented method in a foreign jurisdiction, this means that an action for infringement by ‘use’ will extend to commercial conduct that is not specifically included in the

<sup>88</sup> Stewart et al, *Intellectual Property in Australia* (2014, 5<sup>th</sup> ed, LexisNexis Butterworths) 485.

<sup>89</sup> *Azuko Pty Ltd v Old Digger Pty Ltd* (2001) 52 IPR 72.

<sup>90</sup> *Ibid* 107; see also, *Bedford Industries Rehabilitation Association Inc v Pinefair Pty Ltd* (1998) 87 FCR 458, 469–70 (Mansfield J).

<sup>91</sup> *Ibid* 136; in dissent, Heerey J stated that ‘use’ for the sake of ‘prior secret use’ compendiously refers to all the exclusive rights in the definition of exploit in s 13(1), (at: 117).

<sup>92</sup> *Saccharin Corp Ltd v Anglo-Continental Chemical Works Ltd* [1900] RPC 307.

<sup>93</sup> See generally, *ibid*; see also, *Pfizer Corp v Minister of Health* [1965] AC 512; *Beecham Group Ltd v Bristol Laboratories Ltd* [1978] RPC 153.

<sup>94</sup> *Patents Act 1990* (1990) sch 1 (definition of ‘exploit’); *Alphapharm Pty Ltd v H Lundbeck A/S* (2008) 76 IPR 618, 745–6 (Lindgren J).

<sup>95</sup> *Saccharin Corp Ltd v Anglo-Continental Chemical Works Ltd* [1900] RPC 307, 308–9.

<sup>96</sup> *Ibid* 315–8.

<sup>97</sup> *Ibid* 318–9.

<sup>98</sup> *Ibid* 319 (Buckley J).

boundaries of the claims. Indeed, this can be viewed as a type of extra-dimensional protection in the sense that a patented process is infringed when a product is imported.

The reasoning from *Saccharin* has been applied in Australia. In *Re Application of Eli Lilly and Co (Eli Lilly)*,<sup>99</sup> Wootten J had to decide whether a patentee had received adequate remuneration for the purposes of patent term extension.<sup>100</sup> His Honour held that one way to establish whether the patentee had obtained commercial gain from the patent was to assess whether their conduct would be equivalent to infringing it.<sup>101</sup> The patent in question claimed monensic acid as a product, and various processes for its production.<sup>102</sup> The patentee imported a variant of the chemical claimed in the patent, monensic salt, which his Honour found to be a simple alternative form of monensic acid convenient for packaging.<sup>103</sup> Applying the reasoning that originated in *Saccharin*, Wootten J held that the importation of monensic salt in Australia constituted 'use' because it resulted from the performance of the patented process abroad.<sup>104</sup>

Since the cases of *Eli Lilly* and *Saccharine* represent instances where a type of extra-dimensional protection was extended to patented methods, it is constructive to consider whether a similar type of extra-dimensional protection could be afforded to patented physical products when a CAD file is made of one and distributed. There is little doubt that if such actions were infringing, then a patentee would be in a stronger position to protect the economic value of their invention by prohibiting people from sharing CAD files that are directed to printing their patented product. However, there are various aspects concerning the enforcement of patented physical products which means this type of protection is not warranted. Most notably, as outlined above, when a patented product is printed from a CAD file, infringement arises via the product being 'made'. Thus, in the absence of the creation and distribution of CAD files constituting infringement, patentees of physical products do still have recourse to enforce their rights. Moreover, if infringement via 'use' was to be found in the creation and distribution of CAD files, then a variety of other activities that are currently non-infringing may become infringing. For example, if a company wants to experiment on an invention to improve or modify it, they may ask a third party to create a CAD file so they can work with the design of it on a computer. Under an extended interpretation of 'use', the actions of the third party in creating the CAD file and sending it to them could be infringing, even though the party who requested the CAD file may be exempt from infringement because their actions would be considered acts undertaken for experimental purposes.<sup>105</sup> Similarly, under this interpretation of

<sup>99</sup> *Re Application of Eli Lilly and Co* [1982] 1 NSWLR 526.

<sup>100</sup> *Ibid* [527], [532].

<sup>101</sup> *Ibid* [523].

<sup>102</sup> *Ibid* [527]–[528], [532].

<sup>103</sup> *Ibid* [532].

<sup>104</sup> *Ibid* [533].

<sup>105</sup> *Patents Act 1990* (Cth) s 119C.

‘use’, creation of a CAD file to send to another jurisdiction could be infringing, even though the product is printed outside the patent area.<sup>106</sup>

The discussion in this section shows that although the activity of ‘use’ is not exhaustively defined in Australian law, current decisions on what it does include do not provide a rational basis to argue that the creation and distribution of CAD files constitutes infringement. Similarly, although case law concerning patented methods shows that they receive a type of extra-dimensional protection when products resulting from their performance outside jurisdiction are imported, the rationale that led to this finding cannot be directly transposed to an argument that the distribution of CAD files should constitute infringement. As a result, it is unlikely that any theory of infringement under the activity of ‘use’ warrants a finding of infringement.

#### D. Should ‘Exploit’ Include Digitally ‘Communicating’ CAD files?

The ‘centrepiece’ of the *Copyright Amendment (Digital Agenda) Act 2000* (Cth) introduced the exclusive right of ‘communication to the public’.<sup>107</sup> This was specifically designed to make unauthorised sharing of digital copyright material, such as movies and music, constitute primary infringement.<sup>108</sup> ‘Communicate’ is defined in the *Copyright Act 1968* (Cth) to mean ‘make available online or electronically transmit ... work or other subject-matter’.<sup>109</sup> A number of commentators have discussed the analogy between digitised music/movies and digitised physical products in 3D printing.<sup>110</sup> Thus, given the overlap in concern about infringement via distribution of files, it is worth considering whether enacting an equivalent provision in patent law is necessary to ensure that online CAD file distribution constitutes infringement by exploitation.

One difficulty with this proposition is that the right of communication to the public is not particularly well suited to patent law. Copyright law was amended because digital transmission facilitated another way to enjoy copyright content without the permission of the copyright owner. Thus, it was deemed necessary to add this exclusive right to provide sufficient protection. However, as the analysis of creation and distribution of CAD files above reveals, CAD files are not in and of themselves another way to enjoy a patented physical product. At its crux, a CAD file is information that instructs a 3D printer to make an item. To this end, creating a right to ‘communicate’ patented information would result in an extension of patent rights to exclude sharing information about how to make an invention. This point overlaps with much of the analysis above. Most notably, infringement by exploitation need only be found when practical activities, relative to the invention and essential for

<sup>106</sup> Ibid, s 13(3), sch 1 (definition of ‘patent area’).

<sup>107</sup> Explanatory Memorandum, Copyright Amendment (Digital Agenda) Bill 1999, 2.

<sup>108</sup> Ibid.

<sup>109</sup> *Copyright Act 1968* (Cth) s 10(1) (definition of ‘communicate’).

<sup>110</sup> See generally, Dinusha Mendis, “‘The Clone Wars’: Episode 1 – The Rise of 3D Printing and its Implications for Intellectual Property Law – Learning Lessons From the Past?” (2013) 35(3) *European Intellectual Property Review* 155; Deven Desai and Gerard Magliocca, ‘Patents, Meet Napster: 3D printing and the Digitisation of Things’ (2014) 102 *Georgetown Law Journal* 1691.

its protection, are exercised. Indeed, if a type of communication right was introduced into patent law, it could capture typed instructions to make a product when digitally transmitted. This would be particularly problematic if the instructions detail how to make an invention and are communicated to instruct people on how to avoid infringement.

### E. Conclusion on Infringement by Exploitation Arguments

Ultimately, although a variety of plausible infringement by exploitation arguments can be raised for the creation and distribution of CAD files, none of them present an infringement argument that is likely to prevail. The arguments based on *Windsurfing* and on the UK cases concerning ‘use’ present interesting arguments that test the boundaries of the law, but there is no precedent for either and their jurisprudential underpinning is weak. Moreover, the analysis here suggests that if infringement by exploitation were found when CAD files are created or distributed, it would extend patent protection to protecting quite abstract pieces of information in circumstances that do not necessarily require it and that this may actually have negative effects.

## II. Secondary Infringement

As foreshadowed in the introduction to this chapter, the analysis in this part considers whether the distribution of CAD files may constitute secondary infringement via authorised infringement, or supply infringement.<sup>111</sup>

### A. Authorised Infringement

Section 13(1) of the *Patents Act* refers to the ‘exclusive rights ... to exploit the invention and to *authorise* another person to exploit the invention.’ The current application of authorised infringement emerges from this passage,<sup>112</sup> and is augmented by analogy to copyright. To be liable for authorised infringement, a party must have ‘sanctioned, approved or countenanced’ infringement by a third party.<sup>113</sup> However, liability will only be found when all the facts of the case are considered.<sup>114</sup> There are three relevant cases, two copyright and one patent, that are central to whether distribution of CAD files could constitute authorised infringement. These are: *Roadshow*

<sup>111</sup> *Patents Act 1990* (Cth) ss 13(1), 117(1). A plausible secondary infringement argument could probably also be made under procured infringement (see, Chapter 3 pt II D for a detailed analysis of this cause of action) however, since supply infringement and authorisation appear to create quite clear liability, there is no need to consider further causes of action.

<sup>112</sup> *Ibid* s 13(1).

<sup>113</sup> *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 115 (Kenny J); *Streetworx Pty Ltd v Artcraft Urban Group Pty Ltd* (2014) 110 IPR 82, 151–3 (Beach J); *Inverness Medical Switzerland GmbH v MDS Diagnostics Pty Ltd* (2010) 85 IPR 525, 568–70 (Bennett J); *Roadshow Films Pty Ltd v iiNet Ltd* (2012) 248 CLR 42, 62–3 (French CJ, Crennan and Kiefel JJ), 84–86 (Gummow and Hayne JJ). However, it should also be noted that this approach has been criticised for ignoring legislating history of the *Patents Act 1990* (Cth), see generally, Ann L Monotti, ‘Infringement of a Patent by Authorisation: Clear or Muddy Waters?’ (2013) 24 *Australian Intellectual Property Journal* 5.

<sup>114</sup> *Roadshow Films Pty Ltd v iiNet Ltd* (2012) 248 CLR 42, 48 (French CJ, Crennan and Kiefel JJ), 89 (Gummow and Hayne JJ).

*Films Pty Ltd v iiNet Ltd* ('iiNet'),<sup>115</sup> *Cooper v Universal Music Australia Pty Ltd* ('Cooper')<sup>116</sup> and *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* ('SNF').<sup>117</sup>

In *iiNet*, an Internet service provider ('ISP') was accused of authorising the copyright infringement of its clients, namely the download of movies and television shows.<sup>118</sup> In two joint judgments, the High Court stated that authorisation involves the consideration of three key elements: the nature of the relationship between the infringer by exploitation and alleged authoriser, the power to prevent infringement, and steps taken to prevent infringement.<sup>119</sup> Through considering these elements, both judgments in the High Court unanimously found the ISP did not authorise the copyright infringement of its customers.<sup>120</sup> In reaching this conclusion, the judgments put significant weight on the fact that the only power the ISP had to prevent their client's infringement was by terminating the Internet services they provided.<sup>121</sup> This, their Honour's held, was a power that would not prevent infringement, just prevent further infringement via that ISP as an intermediary.<sup>122</sup> Moreover, in order to exercise that power, the ISP would be required to identify infringing articles and identify which clients were accessing them, a difficult and time consuming task.<sup>123</sup>

By contrast, in *Cooper* the Full Federal Court unanimously found the applicant authorised infringement.<sup>124</sup> In this case, the applicant was the registered owner and operator of the website 'MP3s4FREE'.<sup>125</sup> The website itself did not include music files but provided hyperlinks to other sites where Internet users could download them for free.<sup>126</sup> In finding infringement, all the members of the Court found that although the applicant did not necessarily converse with the ultimate infringers, by providing the files on the website, the relationship was sufficient for authorised infringement.<sup>127</sup> It was also found that the applicant had the power to prevent infringement by removing the

<sup>115</sup> *Roadshow Films Pty Ltd v iiNet Ltd* (2012) 248 CLR 42.

<sup>116</sup> *Cooper v Universal Music Australia Pty Ltd* (2006) 156 FCR 380.

<sup>117</sup> *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46.

<sup>118</sup> *Roadshow Films Pty Ltd v iiNet Ltd* (2012) 248 CLR 42, 57.

<sup>119</sup> *Ibid* 67 (French CJ, Crennan and Kiefel JJ), 87 (Gummow and Hayne JJ). These elements are specified in the *Copyright Act 1968* (Cth) s 101(1A), however, they are effectively a codified form of Gibbs J statements in *University of New South Wales v Moorhouse* (1975) 133 CLR 1, 12–3; which in themselves are distilled from *Adelaide Corp v Australian Performing Right Association Ltd* (1928) 40 CLR 481, 487. See also, *Cooper v Universal Music Australia Pty Ltd* (2006) 156 FCR 380, 382 (French J), 410–13 (Kenny J), 386–391 (Branson J).

<sup>120</sup> *Roadshow Films Pty Ltd v iiNet Ltd* (2012) 248 CLR 42, 69–71 (French CJ, Crennan and Kiefel JJ), 88–9 (Gummow and Hayne JJ).

<sup>121</sup> *Ibid*.

<sup>122</sup> *Ibid* 70 (French CJ, Crennan and Kiefel JJ), 88 (Gummow and Hayne JJ).

<sup>123</sup> *Ibid* 68 (French CJ, Crennan and Kiefel JJ), 88–9 (Gummow and Hayne JJ); it is worth noting here that in *Dallas Buyers Club LLC v iiNet* [2015] FCA 317 (7 April 2015), Perram J ordered an ISP to reveal the account details of IP addresses which the applicant alleged were involved in copyright infringement, see [1]–[2], [92]–[93].

<sup>124</sup> *Cooper v Universal Music Australia Pty Ltd* (2006) 156 FCR 380, 391 (Branson J), 413 (Kenny J), 382 (French J agreeing with Branson and Kenny JJ).

<sup>125</sup> *Ibid* 382.

<sup>126</sup> *Ibid* 382–3.

<sup>127</sup> *Ibid* 390 (Branson J), 412 (Kenny J), 382 (French J agreeing with Branson and Kenny JJ).



hyperlinks or ascertaining the legality of the MP3s.<sup>128</sup> Moreover, that the applicant could have taken these steps to prevent infringement but didn't.<sup>129</sup>

In the patent case, *SNF*, Kenny J found authorised infringement occurred when a party supplied a key component of a method patent, advised how to conduct infringing actions, and had the power to prevent infringement because they could choose not to supply the component.<sup>130</sup> Importantly, on the question of the required mental state, Kenny J also specified that it is not relevant whether an authoriser knows that certain actions will result in infringement, no mental state need be proved.<sup>131</sup>

In application to the distribution of CAD files, the argument is that a downloader who prints a CAD file commits infringement by exploitation, and authorised infringement operates to make the distributor liable. At this stage it is necessary to distinguish between different modes of distribution, as they warrant slightly different analyses. Four different modes of transfer will be discussed:

1. emailing a CAD file;
2. providing a direct link to download a CAD file on a distributor's own website;
3. uploading a CAD file to a BitTorrent site such as *The Pirate Bay*; and
4. uploading a CAD file to a 3D printing website.

The situations of emailing a CAD file to someone or providing it to someone via a distributor's own website are both factually quite similar to *SNF* and *Cooper*. That is, the distributor is supplying a key component to enable infringement by exploitation via 'making' an infringing article, and the distributor would have sufficient power to prevent any infringement by choosing not to distribute it. Since authorised infringement does not require knowledge that the conduct results in infringement, even if they do not know the product itself infringes, it does appear liability could be established, particularly if the alleged authoriser takes no steps to avoid infringement.

A similar analysis also applies to uploading a CAD file to a BitTorrent site such as *The Pirate Bay* or 3D printing websites such as *Shapeways*,<sup>132</sup> or *Thingiverse*.<sup>133</sup> However, before exploring liability further in these scenarios, some background information on these distribution channels is needed. BitTorrent, as outlined in *iiNet*,<sup>134</sup> is an online peer-to-peer file sharing protocol that enables users to download and make available computer files by communicating directly between users. Websites

<sup>128</sup> Ibid 387–90 (Branson J), 411–2 (Kenny J). Cf. *Roadshow Films Pty Ltd v iiNet Ltd* (2012) 248 CLR 42, 69–71 (French CJ, Crennan and Kiefel JJ), 88–9 (Gummow and Hayne JJ).

<sup>129</sup> Ibid 390–1 (Branson J), 412 (Kenny J).

<sup>130</sup> *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 118–9; this case was appealed, but only on invalidity, not infringement, *SNF (Aust) Pty Ltd v Ciba Specialist Chemicals Water Treatments Ltd* (2012) 96 IPR 365, 365–6.

<sup>131</sup> *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 119; see also, *Streetworx Pty Ltd v Artcraft Urban Group Pty Ltd* (2014) 110 IPR 82, 153 (Beach J); *University of New South Wales v Moorhouse* (1975) 133 CLR 1, 21–22 (Jacobs J), 7 (McTiernan ACJ agreeing with Jacobs J), 13 (Gibbs J).

<sup>132</sup> Shapeways, < <http://www.shapeways.com/>>.

<sup>133</sup> Thingiverse, < <http://www.thingiverse.com/>>.

<sup>134</sup> *Roadshow Films Pty Ltd v iiNet Ltd* (2012) 248 CLR 42, 43.

such as *The Pirate Bay* provide lists of files available for transfer and host torrent files that, once downloaded and executed, initiate the peer-to-peer transfer. Distributors can share files via BitTorrent by uploading new torrent files to sites like *The Pirate Bay*. Interestingly, in 2012 *The Pirate Bay* created a new category for sharing of 3D printing files called 'physibles'.<sup>135</sup> 3D printing websites such as *Shapeways* or *Thingiverse* operate by hosting CAD files that are uploaded by distributors. *Thingiverse* operates as a 3D printing community where downloaders can access CAD files for free and print corresponding products themselves.<sup>136</sup> *Shapeways* operates as a marketplace where users pay for a file and get *Shapeways* to print it for them. Profits from transactions on *Shapeways* go to the designers of the relevant CAD files.<sup>137</sup>

In uploading to a BitTorrent site or a 3D printing site, a distributor is supplying a CAD file through means they do not directly control, but in both situations, a distributor is intending for other people to download a CAD file that is capable of printing an infringing article. Moreover, the resultant infringement could be avoided if the distributor chose not to upload the file. Indeed, uploading to these sites implicates distributors more so than in *Cooper* where the infringer only created links and did not supply the infringing content himself. Thus, like in the first two modes of distribution, in the absence of any steps taken to avoid infringement, arguments for authorised infringement in these scenarios have sound bases.

The analysis in this section indicates that, overall, none of the four scenarios appear to resemble an *iiNet* type situation where the distributor does not have power to prevent infringement, or is conducting a business in which the infringing conduct is not directly linked to the alleged authorised actions. This means that, absent any steps taken to avoid infringement by exploitation, authorised infringement arguments appear to be applicable to the distribution of CAD files.

## B. Supply Infringement

The next secondary infringement cause of action considered in this chapter is supply infringement, which is specified in s 117 of the *Patents Act*.<sup>138</sup> This provision is referenced throughout this thesis, thus it is useful to extract the provision in full.

(1) If the use of a product by a person would infringe a patent, the supply of that product by one person to another is an infringement of the patent by the supplier unless the supplier is the patentee or licensee of the patent.

(2) A reference in subsection (1) to the use of a product by a person is a reference to:

<sup>135</sup> *User:Physibles*, Wikipedia <<http://en.wikipedia.org/wiki/User:Physibles>>.

<sup>136</sup> *About*, Thingiverse <<http://www.thingiverse.com/about>>.

<sup>137</sup> *About*, Shapeways <<http://www.shapeways.com/about?li=footer>>. See also, Kevin Smith, *Now Anyone Can Use 3D Printing to Make Money* (20 December 2012) Business Insider Australia <<http://www.businessinsider.com.au/shapeways-3d-printing-2012-12>>.

<sup>138</sup> *Patents Act 1990* (Cth) s 117.

- (a) if the product is capable of only one reasonable use, having regard to its nature or design—that use; or
- (b) if the product is not a staple commercial product—any use of the product, if the supplier had reason to believe that the person would put it to that use; or
- (c) in any case—the use of the product in accordance with any instructions for the use of the product, or any inducement to use the product, given to the person by the supplier or contained in an advertisement published by or with the authority of the supplier.

On first glance, if a CAD file is distributed to a person who uses it to ‘make’ an infringing product, then, it appears that, consistent with s 117(1), a supplied product is used by a person to infringe a patent. However, before considering the applicability of the scenarios listed in s 117(2) to the four modes of distribution described above,<sup>139</sup> two aspects of s 117 must first be addressed to highlight important distinctions between Australian and US law.

First, any action under s 117(1) requires that a ‘product’ be supplied. In contrast, the US supply infringement action under § 271(c)<sup>140</sup> creates liability when a *component* is sold and the seller knows that the *component* can be used to create a patented product.<sup>141</sup> Brean concludes that this cause of action is not applicable where CAD files are concerned, as judicial decisions there have established that for the purposes of this provision, a component does not include software.<sup>142</sup> Australian law most likely differs on this point. In the High Court case of *Northern Territory v Collins* (*‘Collins’*),<sup>143</sup> Hayne J (with whom Gummow ACJ and Kirby J agreed)<sup>144</sup> stated that ‘product’ in s 117 generally has its ‘ordinary meaning’.<sup>145</sup> Given that software and CAD files can be bought and sold, it seems difficult to argue that they do not fit within the ordinary meaning of ‘product’. Moreover, from a practical point of view, computer programs and files are created and patented for use with specific machines. If s 117 did not apply to the distribution of software or computer files, then distributors of the software component of such inventions could not be held liable under s 117. Accordingly, ‘product’ is likely include software and, more specifically, CAD files.

Second, successful s 117(2)(a) and (c) actions have not required that a mental element be proved. For example, regarding s 117(2)(a), in *Zetco Pty Ltd v Austworld Commodities Pty Ltd (No 2)*<sup>146</sup> Bennett J stated, ‘[i]f a product supplied has only one reasonable use and that use is infringing,

<sup>139</sup> See pt II A.

<sup>140</sup> This section is one of two indirect infringement mechanisms under US law. The other mechanism, induced infringement, is discussed below.

<sup>141</sup> 35 USC § 271(c) (emphasis added).

<sup>142</sup> Daniel Brean, ‘Asserting Patent to Combat Infringement via 3D Printing: It’s No “Use”’ (2013) 23 *Fordham Intellectual Property, Media & Entertainment Law Journal* 771, 796–800.

<sup>143</sup> *Northern Territory v Collins* (2008) 235 CLR 619.

<sup>144</sup> Ibid 623 (Gummow ACJ and Kirby J).

<sup>145</sup> Ibid 628.

<sup>146</sup> *Zetco Pty Ltd v Austworld Commodities Pty Ltd (No 2)* [2011] FCA 848 (1 August 2011).

supply of the product will infringe s 117(1) via s 117(2)(a), regardless of any other surrounding circumstances.<sup>147</sup> Similarly, on s 117(2)(c), in *Sanofi-Aventis v Apotex (No 3)*,<sup>148</sup> Jagot J found that instructions alone were sufficient to satisfy the requirements contained in the provision, and it did not stipulate any mental element.<sup>149</sup> On appeal, Bennett and Yates JJ found no error with Jagot J's reasoning.<sup>150</sup> Both of these findings on law are open to appellate review. But since s 117(2)(b) specifies a mental state requirement and ss 117(2)(a) and 117(2)(c) do not, it is likely correct that no mental element is required to be established in respect of these sub-sections. This contrasts markedly with the US position. Both induced infringement (under § 271(b)) and supply infringement can only be found when an alleged infringer subjectively knows that their actions will result in a certain act, and they know that act is infringing.<sup>151</sup> Brean notes that the recent Supreme Court decision of *Global-Tech Appliances Inc v SEB SA*<sup>152</sup> has specified that this knowledge requirement can be made out when a party is wilfully blind to the infringement risks that their behaviour entails.<sup>153</sup> However, he also concludes that, due to the high threshold of knowledge that must be proven, distribution of CAD files that are used to print infringing products will only result in a finding of indirect infringement in the most egregious situations.<sup>154</sup>

Referring again to the four modes of distribution from the analysis above, the modes of distribution that involve emailing a CAD file to someone or allowing a user to download it from a distributors website are likely to constitute infringement under s 117(2)(a). It is true that CAD files can be edited, which means that a CAD file which is created to print an infringing product could be altered to produce a non-infringing product. However, if a file is created to print an infringing item and the file is very nearly always used to print an infringing product, then due to the nature of the file and its designed use, it is likely to be found as a product with only one 'reasonable use' that is infringing. As a result, infringement liability under s 117(2)(a) does appear to be a real possibility.

Although much of the argument immediately above also applies to the situation of uploading a CAD file to an intermediary website such as *The Pirate Bay* or *Shapeways*, the situation is a little more complex. In these situations, an argument can be made against infringement, namely that the uploader is not supplying to the ultimate infringers, rather it is the intermediary website that is carrying out this aspect of supply. On this point, 'supply' is defined in the *Patents Act*, to include '(a)

<sup>147</sup> Ibid [77].

<sup>148</sup> *Sanofi-Aventis v Apotex (No 3)* (2011) 196 FCR 1.

<sup>149</sup> Ibid 77.

<sup>150</sup> *Apotex Pty Ltd v Sanofi-Aventis Pty Ltd (No 2)* (2012) 204 FCR 494, 528.

<sup>151</sup> *Global-Tech Appliances Inc v SEB SA*, 131 S Ct 2060, 2067–71 (2011). This case is actually decided on the 35 USC 271(b), not 271(c). However, as the Supreme Court majority states in this case, 271(b) and 271(c) have the same knowledge requirements: at 2068; see also, *Aro Manufacturing Co v Convertible Top Replacement Co*, 365 US 336, 488 (1961).

<sup>152</sup> *Global-Tech Appliances Inc v SEB SA*, 131 S Ct 2060 (2011).

<sup>153</sup> Ibid 2070; Daniel Brean, 'Asserting Patent to Combat Infringement via 3D Printing: It's No "Use"' (2013) 23 *Fordham Intellectual Property, Media & Entertainment Law Journal* 771, 794.

<sup>154</sup> Daniel Brean, 'Asserting Patent to Combat Infringement via 3D Printing: It's No "Use"' (2013) 23 *Fordham Intellectual Property, Media & Entertainment Law Journal* 771, 793–6.

supply by way of sale, exchange, lease, hire or hire purchase; and (b) offer to supply...'.<sup>155</sup> In *Collins*, the Court was asked to determine whether a grant that permitted a 'company to "go upon Crown Lands and take ... timber" amounted to 'supply'. Hayne J (with whom Gummow ACJ and Kirby J agreed)<sup>156</sup> stated 'that the word is used in the Act with a large operation',<sup>157</sup> and that:

Whether there was a supply of timber is not to be answered by attempting to classify what was granted as an interest in realty or personalty. Nor is it to be answered by asking whether there was a sale of a chattel or by asking, as the appellant submitted, whether the conditions of the licence were enforceable only by forfeiture. Rather, it is to be observed that the licences permitted the licensee to sever and take the timber. That being so there was a supply of the timber. The appellant supplied the licensee with the timber by granting the licences it did.<sup>158</sup>

In the same case, Crennan J found the definition of 'supply' was not exhaustive and encompassed 'any means by which something is passed from one person to another'.<sup>159</sup>

These passages do not definitively state that products supplied through intermediaries engage s 117. However, the statements that the term 'supply' is to have 'large operation' and that it includes 'any means by which something is passed', do suggest that granting a user the ability to obtain a CAD file via an intermediary would be sufficient. More broadly, looking to the UK,<sup>160</sup> a jurisdiction that was influential in the creation and drafting of s 117,<sup>161</sup> it has been held there that supply infringement applies irrespective of whether the infringer by exploitation acquires the product from the accused supplier or from an intermediary.<sup>162</sup> From a practical perspective, this interpretation makes sense since it would be odd if a party producing products that inexorably were used for an infringing purpose could avoid liability by supplying through a middleperson. Consequently, it does appear that distributors of CAD files in all four scenarios that can be used to print an infringing item are likely to be liable under s 117(2)(a).

The second scenario of supply infringement in s 117, s 117(2)(b), requires proof that a product is not a 'staple commercial product', and that 'the supplier had reason to believe' that the product would be put to the infringing use alleged. The term, 'staple commercial product' is not defined in the *Patents Act*, but it has been interpreted by the High Court in *Collins*. In that case, Gummow ACJ and

<sup>155</sup> *Patents Act 1990* (Cth) sch 1 (definition of 'supply').

<sup>156</sup> *Northern Territory v Collins* (2008) 235 CLR 619, 625.

<sup>157</sup> *Ibid* 633.

<sup>158</sup> *Ibid* 633.

<sup>159</sup> *Ibid* 651.

<sup>160</sup> *Patents Act 1977* (UK) c 37, ss 60(2)–(3).

<sup>161</sup> Statement of the Minister for Science, Government Response to the Report of the Industrial Property Advisory Committee, 'Patents, Innovation and Competition in Australia' (1986) 56 *The Australian Official Journal of Patents, Trade Marks and Designs* 1462, 1477.

<sup>162</sup> *Grimme Landmaschinenfabrik GmbH & Co KG v Scott* [2011] FSR 7, [119] (Etherton and Jacob LJ, with Sir David Keene agreeing, at [141]). See also, *KCI Licensing Inc v Smith & Nephew Plc* [2011] FSR 8 [42]–[56] (Longmore, Jacob and Kitchen LJ).

Kirby J in a joint judgment, adopted part of French J's discussion of 'staple commercial products' from his Honour's preceding Full Federal Court decision.<sup>163</sup> Specifically Gummow ACJ and Kirby J adopted the part of French J's judgment that concluded unmilled timber was a staple commercial product because it had a 'variety of applications'.<sup>164</sup> In the other High Court judgments in this case, Crennan J stated that the 'relevant inquiry is into whether the supply of the product is commercial and whether the product has various uses'.<sup>165</sup> Hayne J agreed with Crennan J on this point, and Heydon J agreed with Crennan J's entire judgment.<sup>166</sup> Accordingly, since *Collins*, courts have concluded that a 'staple commercial product' is one that is supplied for a variety of applications.<sup>167</sup>

In applying this test in *Collins*, it was found that unmilled timber was a staple commercial product and therefore exempt from s 117(2)(b) liability.<sup>168</sup> CAD files that are directed to printing physical products are substantially different to unmilled timber. Relevantly, such CAD files can only be used to print products (or, with modification, to design and print other very similar products) that they form the blueprint for, whereas unmilled timber has a diverse range of applications that extend from extracting oils and sculpture, to heating. It is therefore quite unlikely that CAD files would be classified as 'staple commercial products'. This means that the distribution of CAD files would be amenable to s 117(2)(b) infringement.

On the second requirement of whether the 'supplier had reason to believe' that the product would be put to the infringing use alleged, in *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd*,<sup>169</sup> all three members of the Full Federal Court individually concluded that this requirement could be satisfied objectively,<sup>170</sup> with the test being whether 'a reasonable person in the position of [the supplier] would have reason to hold such a belief'.<sup>171</sup> With regard to each of the four modes of distribution discussed above, as a general rule, this requirement is likely to be satisfied. The reason for this is that if a CAD file is directed to printing an infringing product and is transferred to other people for this purpose, then, by the nature of the file itself, the supplier would have reason to believe that it will be used to print the product it is directed to. It follows that since CAD files directed

<sup>163</sup> *Northern Territory v Collins* (2008) 235 CLR 619, 625–7, citing *Collins v Northern Territory* (2007) 161 FCR 549, 564–70, 582–3.

<sup>164</sup> *Ibid* 626, quoting *Collins v Northern Territory* (2007) 161 FCR 549, 582–3.

<sup>165</sup> *Ibid* 653–4.

<sup>166</sup> *Ibid* 630 (Hayne J), 634 (Heydon J).

<sup>167</sup> See, eg, *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd* (2012) 291 ALR 763, 778–9 (Yates J); *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd* (2013) 296 ALR 50, 65 (Bennett J); *Apotex Pty Ltd v AstraZeneca AB [No 4]* (2013) 100 IPR 285, 410–11 (Jagot J); *AstraZeneca AB v Apotex Pty Ltd* (2014) 226 FCR 324, 417–8 (Besanko, Foster, Nicolas and Yates JJ); *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* [2015] FCA 634 (29 June 2015) (Yates J).

<sup>168</sup> *Northern Territory v Collins* (2008) 235 CLR 619, 626–7 (Gummow ACJ and Kirby J), 654 (Crennan J).

<sup>169</sup> *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd* (2013) 296 ALR 50.

<sup>170</sup> *Ibid* 59 (Emmett J), 73–4 (Bennett J), 90 (Greenwood J). It should also be noted, that unlike the US indirect infringement provisions, no Australian decision has held that under s 117 a supplier must have a reason to believe that a specific patent will be infringed, just that a certain act will occur and that it also happens to infringe a patent.

<sup>171</sup> *Ibid* 59 (Emmett J); see also, *ibid*, 73–4 (Bennett J). It should also be noted that in *AstraZeneca AB v Apotex Pty Ltd* (2014) 226 FCR 324, 419–20 (Besanko, Foster, Nicolas and Yates JJ), 97 (Jessup J agreeing), the Full Federal Court rejected the contention that a patentee must prove a particular person or persons will put the product supplied to an infringement use.

to printing infringing products are unlikely to be classified as 'staple commercial products' and suppliers are likely to believe that they will be put to the infringing use, s 117(2)(b) is likely to be applicable to all four modes of distribution too.

The third scenario under s 117, s 117(2)(c), requires proof that the product supplied is used in accordance with instructions, or that some form of inducement to use the product exists. In the four distribution scenarios discussed, no instructions or inducing conduct were described because in real situations, this would be fact dependent. As a result, and in light of ss 117(2)(a)–(b) appearing to create liability, s 117(2)(c) will not be discussed further.

### C. Conclusion on Secondary Infringement Causes of Action

The analysis of authorised infringement and s 117 infringement in this part suggests that both causes of action are likely to provide relief for patentees against parties who distribute CAD files that are subsequently used to print infringing products. Indeed, on this point, s 117 adds an extra layer of protection because, as specified in s 117(1), it will operate to create liability when 'use of a product by a person *would* infringe a patent'.<sup>172</sup> This means the provision can be enforced even if infringement is yet to occur, provided that it can be proved that it will. Of course, apprehended authorised infringement can also be enforced through a *quia timet* action.<sup>173</sup> However, this feature in s 117 simplifies secondary infringement actions when infringement is threatened.

In the foregoing analysis of infringement by exploitation via 'use', a key issue in concluding that no liability would arise was that if distribution of a CAD file constituted infringement then it could deter subsequent, non-infringing activity. Examples of experimental use, and enabling creation of the invention in a foreign jurisdiction were given. But this is very unlikely to be the case under authorised infringement or supply infringement, because these secondary modes of infringement can only arise when infringement by exploitation on behalf of a person supplied occurs (or will occur). This suggests that liability via these means is more fitted to CAD file creation and distribution than infringement by exploitation, because experimentation is exempt from infringement,<sup>174</sup> and Australian patents do not operate overseas.<sup>175</sup> Distributors in these situations just have to ensure that their CAD files are not distributed more broadly to people who will use them for an infringing purpose.

<sup>172</sup> *Patents Act 1990* (Cth) s 117(1) (emphasis added).

<sup>173</sup> *Roadshow Films Pty Ltd v iiNet Ltd* (2012) 248 CLR 42, 74 (Gummow and Hayne JJ); *WEA International Inc v Hanimex Corporation Ltd* (1987) 17 FCR 274, 288 (Gummow J); *Apotex Pty Ltd v Les Laboratoires Servier (No 2)* (2012) 293 ALR 272, 280–1 (Bennett J).

<sup>174</sup> *Patents Act 1990* (Cth) 119C.

<sup>175</sup> *Ibid* 13(3).

## Conclusion

3D printing not only offers great scope to researchers, consumers and manufacturers to develop new products, but it is likely also to provide a useful avenue for distribution of inventions. Concomitant with this potential, though, is significant latitude for infringement through the creation and distribution of CAD files that would violate patent rights over physical products. The question this chapter has addressed is whether the infringement provisions in the *Patents Act* are likely to capture conduct of this nature.

This chapter first explored infringement by exploitation arguments. Some of these arguments appear plausible, but finding infringement in such circumstances requires an unnecessary extension of the law into protecting information, an incursion which may have undesired consequences. On first glance, this conclusion may seem unfair to patentees, especially when the distribution complained of may have significant negative effects for inventive endeavour. However, secondary infringement causes of action appear to be more fitted to purpose. Analyses of authorisation and supply infringement indicate that they provide relatively clear liability pathways. This contrasts with US law where Brean asserts that equivalent provisions are generally of no use to patentees. Although secondary infringement does create an element of exclusivity in information, it is suggested that this exclusivity is more tailored. Of course, in any area where judicial interpretation is lacking there remains a level of uncertainty as to its likely application. But importantly, secondary infringement only arises when it is possible to establish infringement by exploitation, and it could therefore be utilised without unduly extending current law, nor eliciting the same concerns about extended infringement to cover what is now, non-infringing conduct.

Quite whether Australian secondary infringement law in its current state is practically suited to all the patent infringement challenges that 3D printing may present requires further research. As detailed above, copyright law was specifically amended to ensure digital transmission of copyright content is protected. However, as a recent government consultation paper concluded, it has not halted online copyright infringement and as a result intermediary liability is currently being reviewed.<sup>176</sup> Interestingly, the analysis in this chapter suggests a similar right of ‘communication’ is not warranted in patent law. The ultimate reason for this is that on a fundamental level, copyright and patent law protect different types of creative endeavour. Nevertheless, if authorisation and supply infringement under patent law become impractical mechanisms to enforce patent rights to the point where the economic incentive provided by patents is eroded, then legislative action may be

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<sup>176</sup> Australian Government, ‘Online Copyright Infringement’ (Discussion Paper, July 2014) <<http://www.ag.gov.au/consultations/pages/onlinecopyrightinfringementpublicconsultation.aspx>>.



required to balance interests. At this point a watching brief should be maintained so that IP issues arising in the context of 3D printing can be quickly and effectively investigated and addressed.<sup>177</sup>

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<sup>177</sup> Dinusha Mendis, Davide Secchi and Phil Reeves, 'A Legal and Empirical Study into the Intellectual Property Implications of 3D Printing' (United Kingdom Intellectual Property Office, March 2015) 7.

## Chapter 3

### Divided Performance and Infringement Causes of Action in Australia

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## Introduction

One of the foundational bases for patent law is that the creation of exclusive property rights incentivises innovation.<sup>1</sup> It follows, then, that if the exclusivity provided by a patent is unenforceable, or if there is uncertainty about whether it is enforceable or not, the value of such a patent may be eroded. This chapter investigates one such area of uncertainty related to ‘interactive claims’,<sup>2</sup> which is a term used to describe method claims in which different steps can, in practice, be performed by separate parties.<sup>3</sup> The scope of what constitutes an interactive claim is broad. For example, if a claim includes the steps of collecting data, analysing it, then sending on the results, and one or more of these steps can, in a business environment, be performed by a separate party, then it is an ‘interactive claim’. The specific focus of this chapter is on performance of interactive claims by parties that are in arm’s-length relationships and the arrangement does not oblige performance of any of the claim’s steps. Performance of a method claim by parties in this situation will be referred to as ‘divided performance’.<sup>4</sup>

The recent United States Supreme Court case of *Akamai Technologies Inc v Limelight Networks Inc* (*‘Akamai’*)<sup>5</sup> has moved the issue of divided performance into the global spotlight. *Akamai*, and its companion case, *McKesson Technology v Epic Systems* (*‘McKesson’*),<sup>6</sup> which were actually heard together before the *en banc* US Court of Appeal for the Federal Circuit, both concerned patented methods related to Internet mediated communication.<sup>7</sup> In the litigation history of these cases, the Courts have explored the boundaries of when direct infringement and indirect infringement actions will create liability for divided performance. Intriguingly, this history includes the *en banc* Federal

<sup>1</sup> William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 20–1, 294–7 see also, 326–32; Joshua S Gans, Philip L Williams, and David Briggs, ‘Intellectual Property Rights: A Grant of Monopoly or an Aide to Competition?’ (2004) 37(4) *The Australian Economics Review* 436, 437–8; Intellectual Property and Competition Review Committee, *Review of Intellectual Property Legislation under the Competition Principles Agreement Final Report* (IP Australia, Phillip, 2000) 22–4; Merges, Menell and Lemley, *Intellectual Property in the New Technological Age* (Aspen Publishers, 6<sup>th</sup> ed, 2012) 11–3.

<sup>2</sup> Also known as ‘multi-user’, ‘divided’, ‘collaborative’ or ‘divided’, claims. See, eg, Lemley et al, ‘Divided Infringement Claims’ (2005) 33 *American Intellectual Property Law Association Quarterly Journal* 255, 256. However, it should be noted that Lemley et al use these terms to describe claims that can *only* be performed by separate parties. Whereas in Ann L Monotti, ‘Liability for Joint Infringement of a Method Patent Under Australian Law’ (2013) 35(6) *European Intellectual Property Review* 318, 318, 323, the author uses the term in a similar manner to its use in this chapter.

<sup>3</sup> Ann L Monotti, ‘Liability for Joint Infringement of a Method Patent Under Australian Law’ (2013) 35(6) *European Intellectual Property Review* 318, 318. In this article, Monotti does not specifically define the term ‘interactive claims’, however, this definition is implicit in her commentary.

<sup>4</sup> A similar nomenclature was adopted in, Joshua P Larson, ‘Liability For Divided Performance of Process Claims After *BMC Resources Inc v Payment tech LP*’ (2008–2009) 19 *DePaul Journal of Art Technology and Intellectual Property Law* 41, 42. Some articles have used the term ‘divided infringement’ to refer to performance of a patented method by parties in arms length relationship (see eg, Sean Africk, ‘Induced to Infringe: Divided Patent Infringement in Light of the *Akamai* Ruling’ (2014) 14 *Nevada Law Journal* 620, 620–2). However, because it is not unequivocally established that ‘divided performance’ should give rise to infringement liability, this chapter uses the term ‘divided performance’.

<sup>5</sup> *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111 (2014). To fully appreciate the contribution the invention in *Akamai* made to telecommunication see, Ben Aiken, ‘Eliminating the Single-Entity Rule in Joint Infringement Cases: Liability for the Last Step’ (2015) 101 *Virginia Law Review* 193, 193–5.

<sup>6</sup> *McKesson Technologies Inc v Epic Systems Corp*, 98 USPQ 2d (BNA) 1281 (Fed Cir, 2011).

<sup>7</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301, 1306 (Fed Cir, 2012).

Circuit finding that liability for both cases could arise via a legislative type of indirect infringement, known as induced infringement.<sup>8</sup> However, a subsequent appeal to the Supreme Court reversed this finding.<sup>9</sup> At writing, the *Akamai* case has, again, been re-heard by the *en banc* Federal Circuit. The decision, in this instance, has found direct infringement. Despite this recent outcome, the contentious nature of law, as represented in these cases, raises the possibility that parties can arrange their conduct to take advantage of a patented methods without infringing them, as long as performance of them is divided between parties at arm's-length. Part 1 of this chapter dissects the litigation history of *Akamai* and *McKesson*. This dissection outlines the key aspects of US law and how divided performance raises enforcement issues for interactive claims that are linked to certain types of modern technologies.

Building on the concern about liability for divided performance in the US, part 2 of this chapter assesses whether the factual scenarios from either case might give rise to infringement liability in Australia. Although a similar evaluation has already been undertaken by Professor Ann Monotti, the assessment provided here delves more deeply into Australian case law and the facts from the US cases.<sup>10</sup> The assessment in this chapter addresses infringement by exploitation,<sup>11</sup> as well as the secondary infringement mechanisms of authorised infringement,<sup>12</sup> supply infringement,<sup>13</sup> and the common law actions of common design<sup>14</sup> and procured infringement.<sup>15</sup> Through the thorough analysis in this part, specific legal and factual impediments to liability under all of Australia's infringement causes of action — except for procured infringement — are identified. This investigation finds that procured infringement is the only cause of action that plausibly creates liability, with the only hurdle to its application being ambiguous statements about whether it actually applies to divided performance.

Part 3 of this chapter adopts a policy orientated perspective and considers whether the factual scenarios from *Akamai* and *McKesson* should constitute procured infringement in Australia. This analysis is not as simple as it first appears, as various commentators have articulated arguments suggesting that it is unnecessary to extend liability to divided performance. Furthermore, judicial comments have suggested that if liability is extended to divided performance, it may open the patent system up to abuse. This part engages with these arguments, and finds that, despite them, procured

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<sup>8</sup> Ibid 1318–9.

<sup>9</sup> *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111, 2118 (2014).

<sup>10</sup> See generally, Ann L Monotti, 'Liability for Joint Infringement of a Method Patent Under Australian Law' (2013) 35(6) *European Intellectual Property Review* 318.

<sup>11</sup> *Patents Act 1990* (Cth) s 13(1).

<sup>12</sup> Ibid.

<sup>13</sup> Ibid s 117.

<sup>14</sup> *SNF (Australia) Pty Ltd v Ciba Specialty Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 115–6; *Bayer Pharma Aktiengesellschaft v Genentech Inc* (2012) 98 IPR 424, 428–32; *Morton-Norwich Products v Intercen Ltd* [1978] RPC 501, 510.

<sup>15</sup> *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239, 258–9; *Danisco AS v Novozymes AS (No 2)* (2011) 91 IPR 209, 244–6; *Damorgold Pty Ltd v Jai Products Pty Ltd* (2014) 105 IPR 60, 72.

infringement should be codified in the *Patents Act 1990* (Cth) ('the *Patents Act*'), specifying that it applies to divided performance.

### I. *Akamai and McKesson*

Before describing the facts and reasoning in *Akamai* and *McKesson*, it is useful to outline some basic aspects of infringement law in the US. Under 35 USC § 271(a), direct infringement can occur when a party, without authority, inter alia makes or uses a patented invention.<sup>16</sup> With regard to 'using' patented method patents, a requirement of US direct infringement law is that all the steps of a method claim must be performed by one party — this requirement is commonly known as the 'single entity rule'.<sup>17</sup> This is clearly a problem for proving direct infringement when divided performance occurs, but US law allows actions of one party to be attributed to another, if the latter party 'directs or controls' the conduct of the former<sup>18</sup> — this is commonly known as 'joint infringement'.<sup>19</sup> What conduct exactly satisfies the 'direction or control' test was examined in the litigation history of *Akamai* and *McKesson*.

In addition to direct infringement, indirect infringement can arise in the US via 35 USC §§ 271(b) and (c).<sup>20</sup> As alluded to above, litigation in *Akamai* and *McKesson* concerned induced infringement under § 271(b). Interestingly, the induced infringement provision is quite short, it states, '[w]hoever actively induces infringement of a patent shall be liable as an infringer'.<sup>21</sup> Relevantly, US decisions have held that induced infringement will be found when it is proved that an 'alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement'.<sup>22</sup> As this passage indicates, induced infringement in the US is not a strict liability offence,<sup>23</sup> it must be proved that the alleged infringer knew (or was wilfully blind) to the fact that the induced conduct would be infringing.<sup>24</sup> Despite this requirement, the analysis of this cause of action in *Akamai* and *McKesson* did not consider this knowledge element or whether the alleged infringers conduct constituted inducement. Rather, it concerned whether direct infringement must be proved as a prerequisite for induced infringement.

<sup>16</sup> 35 USC § 271(a); *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111, 2115–7 (2014).

<sup>17</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301, 1305–6, 1318 (Fed Cir, 2012).

<sup>18</sup> *Akamai Technologies Inc v Limelight Networks Inc* (Fed Cir, 2015 Nos 06-CV-11585, 06-CV- 11109, 13 August 2015) slip op 4.

<sup>19</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 614 F supp 2d 90, 96, 117–9 (D Mass, 2009); *Muniauction Inc v Thomson Corp*, 532 F 3d 1321, 1328 (Fed Cir, 2008); for a brief history of the 'control or direction' test, see, Ken Hobday, 'The Incredibly Ever-Shrinking Theory of Joint Infringement: Multi-Actor Method Claims' (2009–2010) 38 *Capital Law Review* 137, 165–84.

<sup>20</sup> *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111, 2116 (2014).

<sup>21</sup> 35 USC § 271(b).

<sup>22</sup> *Minnesota Mining & Mfg Co v Chemque Inc*, 303 F 3d 1294, 1304–5 (Fed Cir, 2002); affd in, *DSU Medical Corp v JMS Co Ltd*, 471 F 3d 1293, 1306 (Fed Cir, 2006); *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301, 1308 (Fed Cir, 2012).

<sup>23</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301, 1307–8 (Fed Cir, 2012).

<sup>24</sup> *Global-Tech Appliances Inc v SEB SA*, 131 S Ct 2060, 2070 (2011).

There are a few aspects of Internet technology that it is necessary to briefly outline to assist with understanding the patent in *Akamai*. In one of the basic setups for a website, a content provider arranges a computer server to host their website's content as well as other telecommunication technology to distribute it. Typical website content includes text, as well as other 'page objects' such as movies and photos. A common problem associated with such a setup is that if a website's viewers are geographically distant from the content provider's server, or a large number of users want to access the site concurrently, they may experience slow browsing due to transmission times and congestion, particularly when page objects with large files sizes are viewed.<sup>25</sup> To help resolve this problem, content providers often use third party supplied 'content delivery services', which consist of globally networked computer servers. Together, these servers are known as a 'content delivery network' ('CDN').<sup>26</sup>

The patent in *Akamai* claimed various methods and systems for organising CDNs. The two independent method claims asserted in the case both consisted of four steps,<sup>27</sup> and were directed to replicating page objects on CDNs and redirecting viewer's requests for those objects to particular CDN servers.<sup>28</sup> There is some further technical detail to the invention, but what it effectively translates to is a system for distributing page objects on CDN servers around the world so that when a user views a webpage and its associated page objects, the objects that have been distributed on the CDN will be delivered from a server that is proximate to the user. As generally described in the case, through this arrangement, slow browsing issues could be eased because page objects could be retrieved from a number of servers close to the viewer.<sup>29</sup> The step in both claims that was relevant to divided performance was known as 'tagging', which referred to modifying links to page objects that were to be located on the CDN.<sup>30</sup>

In *Akamai*, the patentee operated a CDN and the defendant directly competed with its own CDN.<sup>31</sup> Although the Supreme Court appeal in this case concerned induced infringement, at first instance only direct infringement was argued.<sup>32</sup> Throughout the litigation, an undisputed fact was that the defendant did not perform every step of the claims.<sup>33</sup> In particular, it did not perform any tagging.

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<sup>25</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 614 F sup 2d 90, 96 (D Mass, 2009).

<sup>26</sup> *Ibid.*

<sup>27</sup> *Ibid* 97.

<sup>28</sup> *Ibid.*

<sup>29</sup> *Ibid* 96–7.

<sup>30</sup> *Ibid* 97–8. One of the claims in issue, claim 19, also included the step of 'serving' a website's content from a content providers domain. According to the claim this is performed by the defendant's clients, thus this step is also performed in a divided fashion. However, for simplicity, this step will not be discussed in this chapter because it unnecessarily adds complexity.

<sup>31</sup> *Ibid* 96.

<sup>32</sup> See generally, *ibid.*

<sup>33</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 614 F sup 2d 90, 116–7; *Akamai Technologies Inc v Limelight Networks Inc*, 629 F 3d 1311, 1305–07 (Fed Cir, 2011); *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111, 2115 (2014).

Instead, the defendant provided information to its clients instructing them to do it.<sup>34</sup> This was pivotal because, as outlined above, direct infringement can only be found if a single entity performs all the steps of a method claim. Thus, although the defendant did not itself perform the step of tagging, the patentee argued that performance of the step could be attributed to the defendant because it ‘directed or controlled’ the tagging of its clients.<sup>35</sup> At first instance, a jury was asked to consider whether the defendant ‘directed or controlled’ the tagging by its clients.<sup>36</sup> The jury instructions specified that the test would be satisfied if the clients were ‘acting’ for the defendant.<sup>37</sup> On these instructions, the jury found infringement and awarded the patentee US\$45.5 million in damages.<sup>38</sup>

Shortly after the jury decision, the Federal Circuit case of *Muniauction Inc v Thomson Corp*<sup>39</sup> was decided. This case shed further light on the types of conduct that satisfy the ‘direction or control’ test. The patent in this case related to a method of auctioning bonds online,<sup>40</sup> and included the step of inputting data associated with a bid on a bidder’s computer.<sup>41</sup> The defendant operated an Internet mediated process that performed many of the steps in the patent,<sup>42</sup> but the defendant did not perform the step of inputting data on the bidders’ computer — this was performed by the bidder.<sup>43</sup> Similar to *Akamai*, a key issue before the Court was whether the actions of the bidder could be attributed to the defendant, so it could be said that the defendant performed all the steps in the claim.<sup>44</sup> On this point, the Federal Circuit cited an earlier case, *BMC Resources Inc v Paymentech LP*,<sup>45</sup> in which it was held that the ‘control or direction’ test is only satisfied when conduct is performed on ‘behalf’ of the defendant.<sup>46</sup> The Court in *Muniauction Inc v Thomson Corp* continued this line of reasoning from *BMC Resources Inc v Paymentech LP* and stated that, ‘mere “arms-length cooperation”’ would not satisfy the ‘control or direction’ test.<sup>47</sup> Accordingly, the Court held that controlling access to the bidding system and instructing bidders on how to use its system was not sufficient for infringement, because the bidder ultimately chose whether to insert the information and to make a bid.<sup>48</sup>

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<sup>34</sup> Ibid 116–7.

<sup>35</sup> Lemley et al, ‘Divided Infringement Claims’ (2005) 33 *American Intellectual Property Law Association Quarterly Journal* 255, 256; *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111, 2115 (2014).

<sup>36</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 614 F sup 2d 90, 118–9 (D Mass, 2009).

<sup>37</sup> Ibid 118.

<sup>38</sup> Ibid 95.

<sup>39</sup> *Muniauction Inc v Thomson Corp*, 532 F 3d 1318 (Fed Cir, 2008).

<sup>40</sup> Ibid 1321.

<sup>41</sup> Ibid 1322.

<sup>42</sup> Ibid 1328–9.

<sup>43</sup> Ibid 1328.

<sup>44</sup> Ibid 1329.

<sup>45</sup> *BMC Resources Inc v Paymentech LP*, 498 F 3d 1373 (Fed Cir, 2007).

<sup>46</sup> *Muniauction Inc v Thomson Corp*, 532 F 3d 1318, 1329–30 (Fed Cir, 2008); affirming, *BMC Resources Inc v Paymentech LP*, 498 F 3d 1373, 1379–81 (Fed Cir, 2007).

<sup>47</sup> *Muniauction Inc v Thomson Corp*, 532 F 3d 1318, 1329 (Fed Cir, 2008), affirming *BMC Resources Inc v Paymentech LP*, 498 F 3d 1373, 1371 (Fed Cir, 2007).

<sup>48</sup> *Muniauction Inc v Thomson Corp*, 532 F 3d 1318, 1330 (Fed Cir, 2008).

On the basis of *Muniauction Inc v Thomson Corp*, the defendant in *Akamai* applied to have the trial decision reconsidered.<sup>49</sup> To succeed in this application the defendant had to prove that the jury did not have a sufficient evidentiary basis to reach the decision it made.<sup>50</sup> This meant that the defendant had to prove that there was no substantial evidence that it ‘directed or controlled’ the tagging of its clients.<sup>51</sup> On reconsideration, Zobel J found that the contract between the defendant and its clients was a result of standard arm’s-length negotiation and did not compel the clients to perform the tagging on the defendant’s behalf.<sup>52</sup> Thus, her Honour found that the defendant’s clients’ tagging could not be attributed to the defendant,<sup>53</sup> and therefore the defendant did not infringe the patent.<sup>54</sup> On appeal to the Federal Circuit, Zobel J’s decision was unanimously affirmed.<sup>55</sup> Writing on behalf of the Court, Linn J emphasised the obligation facet of the ‘control or direction’ test, finding that although the defendant’s clients were given instructions and tools to complete tagging, since it was performed at the clients’ discretion, performance was not on the defendant’s behalf.<sup>56</sup>

The initial appeal to the Federal Circuit in *Akamai* was heard before a three-member bench. The next appeal was heard before an ‘*en banc*’, nine-member bench of the Federal Circuit, which is not regularly convened. The US *Federal Rules of Appellate Procedure* state that an *en banc* court is convened to maintain uniformity in the Court’s decisions, or when the proceeding involves a question of ‘exceptional importance.’<sup>57</sup> At the *en banc* appeal, the cases of *Akamai* and *McKesson* were heard together. Thus, before analysing this decision, it is necessary to outline the initial Federal Circuit appeal in *McKesson*.

The patent in *McKesson* was directed towards methods of online communication between healthcare providers and patients.<sup>58</sup> The invention included automatically establishing a webpage for patients that contained details such as the patients’ medical records and treatment details, but its primary advantage was that the website also allowed for communication between patients and healthcare providers to facilitate appointments, prescription refills, and callbacks.<sup>59</sup> The facts in *McKesson* included a type of divided performance. However, a difference between the divided performance in *McKesson* compared to *Akamai* was that the defendant in *McKesson* did not itself perform any of the steps in the patented method. Rather, the defendant in *McKesson* supplied

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<sup>49</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 614 F supp 2d 90, 119 (D Mass, 2009).

<sup>50</sup> *Ibid*

<sup>51</sup> *Ibid* 119.

<sup>52</sup> *Ibid* 122.

<sup>53</sup> *Ibid*.

<sup>54</sup> *Ibid* 123.

<sup>55</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 629 F 3d 1311, 1322 (Fed Cir, 2011).

<sup>56</sup> *Ibid* 1320–22.

<sup>57</sup> *Federal Rules of Appellate Procedure* (1967) rr 35(a)(1)–(2).

<sup>58</sup> *McKesson Technologies Inc v Epic Systems Corp*, 98 USPQ 2d (BNA) 1281 [2] (Fed Cir, 2011).

<sup>59</sup> *Ibid*.



software to healthcare providers who performed many of the steps, but relied on patients to perform the first step of initiating communication with healthcare providers.<sup>60</sup>

In *McKesson*, induced infringement was the primary infringement cause of action argued.<sup>61</sup> The argument presented by the patentee was that healthcare providers were induced to infringe the patent by the defendant. However, to account for the fact that the healthcare providers' patients performed a step in the method claim, the patentee argued that performance of this step could be attributed to the healthcare providers because they 'directed or controlled' the act.<sup>62</sup> In deciding, Linn J, who wrote the opinion for the Court (and with whom Bryson J agreed),<sup>63</sup> held that direct infringement was a prerequisite for induced infringement.<sup>64</sup> Thus, before deciding whether healthcare providers were induced by the defendant, her Honour had to decide whether direct infringement actually took place.<sup>65</sup> On the basis of *BMC Resources Inc v Paymentech LP* and *Muniauction Inc v Thomson Corp*, her Honour found that the relationships between healthcare providers and patients, either via contract or via the doctor-patient relationship, were not sufficient to oblige patients to perform the step of initiating communication on behalf of the healthcare providers; they did it on their own volition.<sup>66</sup>

Before the *en banc* Federal Circuit, argument was presented concerning both direct and induced infringement.<sup>67</sup> Despite this, the majority decision only addressed induced infringement.<sup>68</sup> In contrast to Linn J's initial Federal Circuit decision in *McKesson*, the majority held that direct infringement by one entity is not a prerequisite for induced infringement.<sup>69</sup> Following this, the majority also held that induced performance of a method claim can be found even when the steps are performed by separate parties, as long the performance of the steps was by either the defendant, or parties operating under the defendant's inducement.<sup>70</sup> This finding meant that when proving induced infringement, the issue of whether a party 'directed or controlled' the actions of others was irrelevant.<sup>71</sup>

In reaching this conclusion, the majority reviewed applicable case law and legislation, but found neither binding.<sup>72</sup> On the other hand, the majority found patent policy instructive. On this point, their Honours stated that, 'there is no reason to immunize the inducer from liability for indirect

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<sup>60</sup> Ibid [5].

<sup>61</sup> Ibid [7].

<sup>62</sup> Ibid [5].

<sup>63</sup> Ibid [15].

<sup>64</sup> Ibid [7].

<sup>65</sup> Ibid.

<sup>66</sup> Ibid [10]–[11].

<sup>67</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301, 1306 (Fed Cir, 2012).

<sup>68</sup> Ibid 1306–7; 35 USC § 271(a).

<sup>69</sup> Ibid 1307.

<sup>70</sup> Ibid 1307–9.

<sup>71</sup> Ibid 1316–7.

<sup>72</sup> Ibid 1307–1318.

infringement simply because the parties have structured their conduct so that no single defendant has committed all the acts necessary ... for direct infringement'.<sup>73</sup> Their Honours also stated:

It would be a bizarre result to hold someone liable for inducing another to perform all of the steps of a method claim but to hold harmless one who goes further by actually performing some of the steps himself. The party who actually participates in performing the infringing method is, if anything, more culpable than one who does not perform all the steps.<sup>74</sup>

Ultimately, the majority reasoned that in the context of induced infringement, the single entity requirement 'invites evasion of the principles of patent infringement and serves no policy-based purpose'.<sup>75</sup> Lamentably, the majority did not evaluate whether the defendants' clients were acting under its inducement. Rather, their Honours remanded both cases for further hearings on this understanding of the law.<sup>76</sup>

The cases were not in fact re-heard because the *en banc* decision was appealed to the Supreme Court. Although the appeal from the *McKesson en banc* decision to the Supreme Court was denied, the Supreme Court accepted the case of *Akamai*.<sup>77</sup> Alito J authored the Supreme Court's unanimous judgment.<sup>78</sup> In a short six-page judgment, his Honour overruled the previous decision, finding that single-entity direct infringement is a prerequisite for induced infringement.<sup>79</sup> His Honour's primary reason for reaching this conclusion was that the structure of the legislation and prior Supreme Court authority clearly mandated it.<sup>80</sup> Indeed, Alito J chided the majority's reasoning in the *en banc* decision stating that their Honours' 'analysis fundamentally misunderstands what it means to infringe a method patent'.<sup>81</sup> Alito J did express concern with the 'anomaly' that a party may avoid infringement through divided performance, but found that any such anomaly did not 'justify fundamentally altering the rules of inducement liability that the text and structure of the Patent Act clearly require'.<sup>82</sup> The case was therefore remanded for consideration on the correct understanding of US infringement law.<sup>83</sup>

At writing, the *en banc* Federal Circuit has recently reconsidered whether the defendant in *Akamai* 'directed or controlled' its clients' actions.<sup>84</sup> In a unanimous decision with few references, the Court held that the 'direction or control' test can be satisfied 'when an alleged infringer conditions

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<sup>73</sup> Ibid 1309.

<sup>74</sup> Ibid.

<sup>75</sup> Ibid 1315.

<sup>76</sup> Ibid 1319.

<sup>77</sup> *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111 (2014); *McKesson Technologies Inc v Epic Systems Corp*, 133 S Ct 1521 (2013); *Epic Systems Corp v McKesson Technologies Inc* 133 S Ct 1520 (2013).

<sup>78</sup> *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111, 2115 (2014).

<sup>79</sup> Ibid 2117.

<sup>80</sup> Ibid 2117–8.

<sup>81</sup> Ibid 2117.

<sup>82</sup> Ibid 2120.

<sup>83</sup> Ibid.

<sup>84</sup> *Akamai Technologies Inc v Limelight Networks Inc* (Fed Cir, 2015 Nos 06-CV-11585, 06-CV- 11109, 13 August 2015).

participation in an activity or receipt of a benefit upon performance of a step or steps of a patented method and establishes the manner or timing of that performance.’<sup>85</sup> In applying the facts of the case to these aspects of the law, the Court found that the defendant conditioned its clients’ use of the CDN on their performance of tagging.<sup>86</sup> The Court also found that the defendant established the manner of its clients performing this step by supplying them with the specific information on how to achieve it and providing assistance if it was needed.<sup>87</sup> Thus, the Court found that the defendant ‘controlled or directed’ its clients’ actions and was therefore liable for direct infringement. Whether this outcome will be reviewed by the Supreme Court remains to be seen.

Although, as demonstrated in these cases, the law concerning divided performance has been developing at a relatively rapid pace, a number of US-based scholarly articles have been published on *Akamai* and *McKesson* and, more broadly, on the issue of divided performance itself.<sup>88</sup> A common theme in these articles is questioning whether the law sufficiently protects patented inventions.<sup>89</sup> Or, more specifically, whether divided performance effectively means that parties can organise their commercial activities to take advantage of a patent without infringing it.<sup>90</sup> Related to this concern is that, as *Akamai*, *McKesson* and *Muniauction Inc v Thomson Corp* demonstrate, divided performance is an important part of Internet-based technology. Further to this reasoning, Professor Mark Lemley et al have noted that:

as communications technologies support ever increasing bandwidth, virtually any innovation that employs computation or decision making is susceptible to placement of a particular component or step with an independent vendor ... in a way that may avoid traditional infringement remedies.<sup>91</sup>

In light of this effect on Internet-based technologies, perhaps not surprisingly a number of commentators (prior to the most recent *en banc* case) have referred to the ongoing issue of divided

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<sup>85</sup> Ibid slip op 5.

<sup>86</sup> Ibid slip op 7–8.

<sup>87</sup> Ibid slip op 8–9.

<sup>88</sup> See eg, Nicole D Galli and Edward Gecovich, ‘Cloud Computing and the Doctrine of Joint Infringement: “Current Impact” and Future Possibilities’ (2012) 11 *The John Marshall Review of Intellectual Property Law* 673; Erik P Harmon, ‘Promoting the Progress of Personalized Medicine: Redefining Infringement Liability for Divided Performance of Method Patents’ (2014) 42 *Hofstra Law Review* 967; W Keith Robinson, ‘No “Direction” Home: An Alternative Approach to Joint Infringement’ (2012) 62 *American University Law Review* 59, 103–4; Joshua P Larson, ‘Liability For Divided Performance of Process Claims After *BMC Resources Inc v Payment tech LP*’ (2008–2009) 19 *DePaul Journal of Art Technology and Intellectual Property Law* 41.

<sup>89</sup> See, eg, Reza Dokhanchy, ‘Cooperative Infringement: I Get By (Infringement Laws) With a Little Help From My Friends’ (2011) 26 *Berkeley Technology Law Journal* 135; Damon Gupta, ‘Virtually Uninfringeable: Valid Patents Lacking Protection Under the Single Entity Rule’ (2012) 94 *Journal of the Patent and Trademark Office Society* 61.

<sup>90</sup> Ibid 135–6, 159; Damon Gupta, ‘Virtually Uninfringeable: Valid Patents Lacking Protection Under the Single Entity Rule’ (2012) 94 *Journal of the Patent and Trademark Office Society* 61, 66–8.

<sup>91</sup> Lemley et al, ‘Divided Infringement Claims’ (2005) 33 *American Intellectual Property Law Association Quarterly Journal* 255, 262–3.

performance in the US as a loophole that must be closed.<sup>92</sup> The most recent *en banc* decision, which finds liability on the facts in *Akamai*, affects many of the arguments in these articles, but with the possibility of another Supreme Court review, the law is not yet settled. Moreover, regardless of the outcome in the US, the broader issue of divided performance and the potential loophole in US law represents an issue that should be explored in Australia. In line with this concern, the next part of this chapter considers whether the factual scenarios in *Akamai* and *McKesson* might give rise to infringement liability under Australian patent law.

## II. Might the facts from *Akamai* and *McKesson* result in infringement in Australia?

As outlined in the introduction to this thesis, and again in chapter 2,<sup>93</sup> patent infringement in Australia can be found under three statutory causes of action. Section 13(1) of the *Patents Act* specifies that a patentee has the exclusive right to ‘exploit’ their invention.<sup>94</sup> The definition of ‘exploit’ is extracted in chapter 2 part I.<sup>95</sup> Consistent with this right, infringement by exploitation occurs when a party, without authorisation, encroaches upon a patentee’s right to exploit an invention. Section 13(1) also specifies that a patentee has the right to ‘authorise’ others to ‘exploit’ an invention, and thus infringement can occur if a party other than a patentee ‘authorises’ another party to exploit an invention.<sup>96</sup> In addition, s 117 specifies that, in certain circumstances, suppliers can be liable for infringing uses of the products they supply.<sup>97</sup> Beyond these statutory-based infringement mechanisms, there are two further common law mechanisms: a party can be liable for procuring another party to exploit an invention,<sup>98</sup> or for engaging in a common design with an infringer that exploits an invention.<sup>99</sup> Each cause of action will be addressed in turn.

<sup>92</sup> See generally, Kristin E Gerdeman, ‘Subsequent Performance of Process Steps by Different Entities: Time to Close Another Loophole in US Patent Law’ (2004) 53 *Emory Law Journal* 1987; Long Truong, ‘After *BMC Resources Inc v Paymentech LP*: Conspiratorial Infringement as a Means of Holding Joint Infringers Liable’ (2009) 103 *Northwestern University Law Review* 1897, 1899; W Keith Robinson, ‘No “Direction” Home: An Alternative Approach to Joint Infringement’ (2012) 62 *American University Law Review* 59, 103–4; see also, Joshua P Larson, ‘Liability For Divided Performance of Process Claims After *BMC Resources Inc v Paymentech LP*’ (2008–2009) 19 *DePaul Journal of Art Technology and Intellectual Property Law* 41; Damon Gupta, ‘Virtually Uninfringeable: Valid Patents Lacking Protection Under the Single Entity Rule’ (2012) 94 *Journal of the Patent and Trademark Office Society* 61; Ben Morgan, ‘Joint Infringement and the Impact of *BMC Resources, Inc v Paymentech, L.P.*’ (2008–2009) 12 *Southern Methodist University Science & Technology Law Review* 173, 200; Stacie L Greskowiak, ‘Joint Infringement after BMC: The Demise of Process Patents’ (2010) 41 *Loyola University Chicago Law Journal* 351; Reza Dokhanchy, ‘Cooperative Infringement: I Get By (Infringement Laws) With a Little Help From My Friends’ (2011) 26 *Berkeley Technology Law Journal* 135, 153–4.

<sup>93</sup> See generally, Chapter 2, pts I and II.

<sup>94</sup> *Patents Act 1990* (Cth) s 13(1), sch 1 (definition of ‘exploit’).

<sup>95</sup> See page 59.

<sup>96</sup> See, Chapter 2 pt II A.

<sup>97</sup> *Patents Act 1990* (Cth) s 117(2)(b); see Chapter 2 pt II B.

<sup>98</sup> *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239, 258–9; *Danisco AS v Novozymes AS (No 2)* (2011) 91 IPR 209, 244–6; *Damorgold Pty Ltd v Jai Products Pty Ltd* (2014) 105 IPR 60, 72.

<sup>99</sup> *SNF (Australia) Pty Ltd v Ciba Specialty Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 115–6; *Bayer Pharma Aktiengesellschaft v Genentech Inc* (2012) 98 IPR 424, 428–32; *Morton-Norwich Products v Intercen Ltd* [1978] RPC 501, 510.

### A. Infringement by Exploitation, Agency, and Vicarious Liability

The primary way a method claim is infringed is by encroaching on a patentee's right to 'use' it.<sup>100</sup> It is well established in Australian patent law that a method claim is only infringed when it is proved that an alleged infringer's process takes every step of a patentee's method.<sup>101</sup> As described above, the defendants in *Akamai* and *McKesson* did not perform all the steps of the inventions as claimed. Consequently, to create infringement liability for divided performance in Australia, a legal mechanism must be used to attribute the performance of the divided steps to the defendants.

Australian legal mechanisms that can attribute exploitation of an invention by one party to another include agency and vicarious liability.<sup>102</sup> Unlike US patent law, Australian patent law does not contain a mechanism analogous to the 'control or direction' test.<sup>103</sup> Relevantly, an 'agent' is a person who, by virtue of authority conferred upon them, is able to create or affect legal rights and duties as between another person and third parties.<sup>104</sup> In *Akamai* and *McKesson*, no conferral of legal authority occurred, thus agency type arguments are irrelevant.

The doctrine of vicarious liability attributes the actions of one person to another when there is a sufficient relationship between the two parties, and the actions to be attributed to the 'responsible party' are sufficiently connected to that relationship.<sup>105</sup> Typically, vicarious liability arises between an employer and an employee, but only when an employer has a right to control an employee's actions.<sup>106</sup> Although vicarious liability somewhat resembles the US 'control or direction' test, it has some significant differences. For example, vicarious liability typically applies between employers and employees, but not to the relationships that traditionally arise between sub-contractors and their hirers.<sup>107</sup> Illustrating the high threshold that must be satisfied, Sappideen et al note that vicarious liability will only be found in the employee-employer context when 'the employer can tell the person not only what to do but how to do it.'<sup>108</sup> This includes controlling working hours, the obligation to

<sup>100</sup> *Patents Act 1990* (Cth) s 13(1), sch 1 (definition of 'exploit'). Infringement of a method patent can also occur when a producing resulting from 'use' of the patented method is 'used' or 'sold', however, since the analysis here shows the method is not 'used' it is redundant to also consider this argument.

<sup>101</sup> *Patents Act 1990* (Cth) s 120(1); *Olin Corp v Super Cartridge Co* (1976) 180 CLR 236, 246 (Gibbs J); *Populin v HB Nominees Pty Ltd* (1982) 59 FLR 37, 41; *Danisco AS v Novozymes AS (No 2)* (2011) 91 IPR 209, 237–8, cf. 244–6 (Bennett J).

<sup>102</sup> Sappideen et al, *Torts: Commentary and Materials* (Law, 11<sup>th</sup> ed, 2012) 623–4; *Sykes v Hawartha* (1879) 48 LJ(NS) 770, 773; *Australasian Performing Right Association Ltd v Miles* (1961) 3 FLR 146, 148–9.

<sup>103</sup> It could be argued that the 'direction and control' test should be incorporated into Australian patent law, but since, as explored in pt II D (below), procured infringement plausibly creates liability, it is not necessary to significantly alter Australia law and consider this argument.

<sup>104</sup> *Petersen v Moloney* (1951) 84 CLR 91, 94; See generally, Gino E Dal Pont, *Law of Agency* (Butterworths, 2001) 5–6; *Sykes v Hawartha* (1879) 12 Ch D 826.

<sup>105</sup> Sappideen et al, *Torts: Commentary and Materials* (Law, 11<sup>th</sup> ed, 2012) 624.

<sup>106</sup> *Ibid* 624–5; *Humberstone v Northern Timber Mills* (1949) 79 CLR 389, 404–5.

<sup>107</sup> *Hollis v Vabu* (2001) 207 CLR 21, 36, cf 38–46.

<sup>108</sup> Sappideen et al, *Torts: Commentary and Materials* (Law, 11<sup>th</sup> ed, 2012) 624.

perform tasks, organisation of future tasks, and the ability to control the variety of tasks that will be performed.<sup>109</sup>

In *Akamai* and *McKesson*, the relationships between the defendants and parties performing the steps of the invention as claimed were those of suppliers and clients.<sup>110</sup> Relevantly, the clients chose to perform a limited range of tasks and chose when to perform them at their own discretion. There were no specific time frames for performance and the clients suffered no repercussions beyond not receiving a benefit for which they originally contracted with the defendant to get. In this sense, they are analogous to sub-contractors who choose what work they want to perform and when.<sup>111</sup> Consequently, infringement arguments via vicarious liability would be unlikely to succeed.

### B. Infringement by Authorisation

Compared to infringement by exploitation, authorised infringement under s 13(1) of the *Patents Act* appears more applicable to the facts from *Akamai* and *McKesson*. However, there are well established elements of the cause of action that are likely to prevent any finding of liability here too. The current operation of authorised infringement was described in chapter 2 part II A. The decisions in *Roadshow Films Pty Ltd v iiNet Ltd* ('*iiNet*'),<sup>112</sup> and *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* ('*SNF*')<sup>113</sup> were also described in that chapter, and the analysis here builds on those descriptions. As a brief recap, in *iiNet* both joint judgments in the High Court stated that authorisation involves the consideration of three key elements: the nature of the relationship between the infringer by exploitation and alleged authoriser; the power to prevent infringement; and steps taken to prevent infringement.<sup>114</sup> On the facts in *iiNet*, both judgments found that an Internet service provider ('ISP') did not authorise the copyright infringement of its clients.<sup>115</sup> In reaching this conclusion both judgments put significant weight on the fact that the only power the ISP had to prevent their clients' infringement was by terminating the Internet services they provided.<sup>116</sup> In *SNF*, Kenny J found authorised infringement when a party supplied a key component of a method patent that pertained to treating mining waste.<sup>117</sup> However, in addition to supplying the

<sup>109</sup> Ibid 625.

<sup>110</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 614 F supp 2d 90, 122 (D Mass, 2009).

<sup>111</sup> *Hollis v Vabu* (2001) 207 CLR 21, 36–8.

<sup>112</sup> *Roadshow Films Pty Ltd v iiNet Ltd* (2012) 248 CLR 42.

<sup>113</sup> *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46.

<sup>114</sup> Ibid 67 (French CJ, Crennan and Kiefel JJ), 87 (Gummow and Hayne JJ). These elements are specified in the *Copyright Act 1968* (Cth) s 101(1A), however, they are effectively a codified form of Gibbs J statements in *University of New South Wales v Moorhouse* (1975) 133 CLR 1, 12–3; which in themselves are distilled from *Adelaide Corp v Australian Performing Right Association Ltd* (1928) 40 CLR 481, 487. See also, *Cooper v Universal Music Australia Pty Ltd* (2006) 156 FCR 380, 382 (French J), 410–13 (Kenny J), 386–391 (Branson J).

<sup>115</sup> *Roadshow Films Pty Ltd v iiNet Ltd* (2012) 248 CLR 42, 69–71 (French CJ, Crennan and Kiefel JJ), 88–9 (Gummow and Hayne JJ).

<sup>116</sup> Ibid.

<sup>117</sup> *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 52.

component, the respondent also advised how to conduct infringing actions, provided support, and, had the power to prevent infringement because they could choose not to supply the component.<sup>118</sup>

In many ways, the facts from *Akamai* and *McKesson* are similar to *SNF*. Notably, in both *Akamai* and *McKesson* the defendants created scenarios for all the steps in the method patent claims to be performed. In *Akamai*, this was achieved by setting up the CDN and instructing clients on how to tag page objects, and in *McKesson*, this was achieved by creating and supplying software that, with the interaction of the healthcare provider and patients, would result in each of the steps being performed. Moreover, in both cases, no evidence was adduced demonstrating the defendants took steps to avoid infringement. It follows, then, that if these were the only criteria for authorised infringement, there would probably be a strong basis for arguing that liability may arise in Australia for factual scenarios akin to *Akamai* and *McKesson*. However, both judgments in *iiNet* make it clear that infringement by exploitation must be established as a prerequisite to a finding on authorisation. On this point, French CJ, Crennan and Kiefel JJ stated, ‘a primary infringement of a copyright in a cinematograph film occurs when a person, who is neither the owner nor the licensee, makes the film available online without the copyright owner’s consent; a secondary infringement occurs when a person, who is neither the owner nor the licensee, authorises the making available online of the film without the copyright owner’s consent.’<sup>119</sup> In the same case, Gummow and Hayne JJ stated, ‘a secondary infringement is completed only when the primary infringement has taken place’.<sup>120</sup> This second passage was specifically affirmed by Bennett J in the patent case of *Apotex Pty Ltd v Les Laboratoires Servier*.<sup>121</sup> Thus there is no reason to expect that this element of the law applies in different ways between patent law and copyright law. Indeed, the text in s 13(1) specifically states that patentees have the right to ‘authorise *another person to exploit* the invention.’<sup>122</sup> It follows, then, that since no infringement by exploitation or ‘primary’ infringement has occurred (as outlined above due to divided performance), authorised infringement cannot be found.

In Monotti’s article on infringement of interactive claims by separate parties in Australia, she analyses authorisation from a more abstract perspective, and raises divided performance as a possible ‘hurdle’ to liability.<sup>123</sup> However, since the judicial statements and legislation on this point appear to be quite clear, it appears that, more than a hurdle, this requirement is a barrier to a finding of authorised infringement.

<sup>118</sup> Ibid 118–9; this case was appealed, but only on validity, not infringement, *SNF (Aust) Pty Ltd v Ciba Specialist Chemicals Water Treatments Ltd* (2012) 96 IPR 365, 365–6.

<sup>119</sup> *Roadshow Films Pty Ltd v iiNet Ltd* (2012) 248 CLR 42, 49.

<sup>120</sup> Ibid 74.

<sup>121</sup> *Apotex Pty Ltd v Les Laboratoires Servier (No 2)* (2012) 293 ALR 272, 278.

<sup>122</sup> *Patents Act 1990* s 13(1) (emphasis added).

<sup>123</sup> Ann L Monotti, ‘Liability for Joint Infringement of a Method Patent Under Australian Law’ (2013) 35(6) *European Intellectual Property Review* 318, 324–6.

### C. Supply Infringement

The fact that there was supply of products and services to clients in *Akamai* and *McKesson* suggests that supply infringement under s 117 of the *Patents Act* is a relevant consideration. The text and basic operation of s 117 was outlined in chapter 2 part II B, and the analysis here builds on that.<sup>124</sup> However, before analysing whether the facts from *Akamai* or *McKesson* satisfy any of the scenarios in s 117(2), there are two threshold issues to liability in s 117(1) that need to be considered. These concern the definition of ‘infringement’ and the definition of ‘product’.<sup>125</sup>

The threshold issue concerning the definition of ‘infringement’ emerges from the passage in s 117(1), ‘[i]f use of a product by a person would infringe a patent ...’.<sup>126</sup> The argument under this wording is that because there is no infringement by one person, or one entity, then s 117 is not applicable. In effect, this is (again) the same single entity issue as enunciated in the US cases. In addition to the literal wording of s 117, there are several passages from the judgments in the High Court case, ‘*Northern Territory v Collins*’ (‘*Collins*’),<sup>127</sup> that support this argument. Relevantly, Crennan J stated that, ‘[s]ection 117 covers infringement by supplying another person with a product, the other person being the direct infringer.’<sup>128</sup> Hayne J in the same case stated, ‘[i]t is *that* use which must be identified as the use which would infringe the patent because the hinge about which s 117 turns is its introductory words: “[i]f the use of a product by a person would infringe a patent.”’<sup>129</sup> Emphasising the point, Hayne J continued that s 117 liability, ‘turn[s] upon whether the use in question contravenes the patentee’s exclusive rights under s 13 of the Act’.<sup>130</sup> These explanations of the law mean that there is clear High Court authority stating that supply infringement can only arise when an exploitation within the meaning of s 13 occurs.<sup>131</sup> The significance of this is that, as analysed above, it is unlikely that a right within s 13 is infringed — primarily because of divided performance. As a result, on the basis of these arguments, s 117 is unlikely to be applicable to the factual scenarios from *Akamai* or *McKesson*.

<sup>124</sup> See commentary beginning at page 72.

<sup>125</sup> It is arguable that method claims that do not have a ‘product resulting’ from their ‘use’ are not amenable to s 117 (see, *Rescare v Anaesthetic Supplies Pty Ltd* (1992) 111 ALR 205, 242–3 (Gummow J), affirmed in obiter, *Anaesthetic Supplies Pty Ltd v Rescare* (1994) 50 FCR 1, 45 (Lockhart J), 24 (Wilcox J agreeing with Lockhart J)). However, since this line of reasoning is contrary to the legislature’s intent (see, Ann Monotti, ‘Contributory Infringement of a Process Patent: Does it Exist after Rescare?’ (1995) 6 *Australian Intellectual Property Journal* 217, 223–4) and has been expressly disagreed with (see, *Bristol-Myers Squibb Company v FH Faulding & Co Ltd* (2000) 97 FCR 524, 558 (Black CJ and Lehane J), 573 (Finkelstein J agreeing with Black CJ and Lehane J); *Northern Territory v Collins* (2008) 235 CLR 619, 650 (Crennan J), 634 (Heydon J agreeing with Crennan J)) this chapter will not consider it further.

<sup>126</sup> *Patents Act* 1990 (Cth) s 117(1) (emphasis added).

<sup>127</sup> *Northern Territory v Collins* (2008) 235 CLR 619.

<sup>128</sup> *Northern Territory v Collins* (2008) 235 CLR 619, 642.

<sup>129</sup> *Ibid* 629.

<sup>130</sup> *Ibid*.

<sup>131</sup> See also, *Rescare v Anaesthetic Supplies Pty Ltd* (1992) 111 ALR 205, 242–3 (Gummow J); this reasoning was also labelled as ‘uncontentious’ by Ann Monotti, ‘Contributory Infringement of a Process Patent: Does it Exist after Rescare?’ (1995) 6 *Australian Intellectual Property Journal* 217, 223.



The ‘product’ issue only applies to the factual circumstances in *Akamai*.<sup>132</sup> In that case, although the defendant operated a CDN and supplied associated support for its operation,<sup>133</sup> no specific item relating to using the patented method was supplied. Thus it is arguable that a service, as opposed to a ‘product’ was supplied.<sup>134</sup> Although courts have not dismissed a s 117 case because what was supplied was only a service, previous cases on s 117 have been limited to commodities such as timber,<sup>135</sup> pharmaceuticals,<sup>136</sup> and chemicals.<sup>137</sup> Thus, what was provided in *Akamai* is significantly different in character from what has previously been argued before the courts. Further support for this argument can be found in extrinsic materials to the Act. The 1984 Industrial Property Advisory Committee report (which was instrumental in the inclusion of the supply infringement provision in the *Patents Act*),<sup>138</sup> specifically referred to supply infringement provisions applying to goods, materials, and parts.<sup>139</sup> Given this report laid the basis for s 117, it would be expected that this extrinsic material to the Act would be quite influential in guiding judicial interpretation of the provision. It follows, then, that there are quite sound arguments that the definition of ‘product’ prevents s 117 from applying in circumstances akin to those in *Akamai*.

Although the scenarios in *Akamai* and *McKesson* may not satisfy the requirements in s 117(1), if it is assumed that they did, it would be necessary to identify at least one of the subsections in s 117(2) that apply to the facts from each case. The basic operation of ss 117(2)(a)–(c) were outlined in chapter II part B and this analysis builds on that background information.<sup>140</sup> Section 117(2)(a) refers to an infringing use that is the only reasonable use of the product supplied. In *Akamai*, the ‘product’ supplied (if it can be called that) was a CDN. As outlined in the US case, when the defendant’s CDN was in operation, with all the parties performing their expected steps, all the steps of the method patent were collectively performed.<sup>141</sup> The fact the defendant’s CDN was designed to achieve this outcome,<sup>142</sup> suggests that this use would be classified as its only reasonable use. On this basis, then, the factual circumstances in *Akamai* would likely satisfy the requirements in s 117(2)(a). A similar

<sup>132</sup> An argument could be raised that the software supplied in *McKesson* does not constitute a ‘product’ for the purposes of s 117(1), however, this argument was broadly raised in chapter 2 pt II B and dismissed. Thus, it does not need to be raised here again.

<sup>133</sup> *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111, 2115 (2014).

<sup>134</sup> It should be noted that in *Akamai* instructions on how to use the defendant’s CDN were supplied, but these could not be ‘used’ to infringe a patented method for distributing page objects on a CDN.

<sup>135</sup> See generally, *Northern Territory v Collins* (2008) 235 CLR 619.

<sup>136</sup> See generally, *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd* (2013) 296 ALR 50; *Apotex Pty Ltd v AstraZeneca AB (No 4)* (2013) 100 IPR 285; *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd* (2013) 296 ALR 50.

<sup>137</sup> *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46.

<sup>138</sup> Statement of the Minister for Science, Government Response to the Report of the Industrial Property Advisory Committee, ‘Patents, Innovation and Competition in Australia’ (1986) 56 *The Australian Official Journal of Patents, Trade Marks and Designs* 47, 1462, 1477; Explanatory Memorandum, Patents Bill 1990 (Cth) 28.

<sup>139</sup> Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia*, (Australian Government Publishing Service, Canberra, 1984) 67.

<sup>140</sup> See commentary starting on page 72.

<sup>141</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 614 F supp 2d 90, 116–7 (D Mass, 2009); *Akamai Technologies Inc v Limelight Networks Inc*, 629 F 3d 1311, 1305–07 (Fed Cir, 2011).

<sup>142</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 629 F 3d 1311, 1317–8 (Fed Cir, 2011).

argument can also be constructed for the software supplied in *McKesson*. The trial Court indicated that the purpose of the patent in *McKesson* was to facilitate Internet mediated communication with patients, and that this was something that could only be achieved if all the steps of the method claims were performed.<sup>143</sup> Consequently, there are sound arguments that the facts from both cases would satisfy s 117(2)(a).

A successful s 117(2)(b) action requires proof that the product supplied is not a 'staple commercial product', and that 'the supplier had reason to believe' that the product would be put to the infringing use alleged. Summarising the analysis from the previous chapter, 'staple commercial product' is not defined in the *Patents Act*, but it has been interpreted by the High Court in *Collins* to be one that is supplied for a variety of applications.<sup>144</sup> In reference to the software in *McKesson* and the CDN in *Akamai*, both are unlikely to be classified as staple commercial products because their purposes are quite narrow, namely, patient communication and management in *McKesson*, and website content distribution in *Akamai*. Thus, this requirement is likely to be met.

On the second requirement in s 117(2)(b) — whether 'the supplier had reason to believe' that a person would put the product to the infringing use alleged — in *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd*, all the members of the Full Court of the Federal Court of Australia concluded that this can be satisfied objectively,<sup>145</sup> with the test being whether 'a reasonable person in the position of [the supplier] would have reason to hold such a belief.'<sup>146</sup> As outlined above, the uses of the CDN in *Akamai* and software in *McKesson* were directed towards the infringing purposes alleged, thus the suppliers in both circumstances would have reason to believe that the use would occur because that was what they were designed to do. Consequently, it is likely that both requirements in s 117(2)(b) would be satisfied.

A successful s 117(2)(c) action requires proof that the product supplied is used in accordance with instructions or some form of inducement. As detailed above, in *Akamai*, instructions were provided to the defendant's clients instructing them how to tag objects.<sup>147</sup> By contrast, in *McKesson* no facts were provided in the written decisions pertaining to instructions or technical support. However, as explained above, the case never progressed to considering facts relating to infringement, thus the absence of such facts is not necessary conclusive of whether instructions were provided to clients. Indeed, the defendant's current website details live classroom training, video lessons, and phone and

<sup>143</sup> *McKesson Technologies Inc v Epic Systems Corp*, 98 USPQ 2d (BNA) 1281 [2]–[4] (Fed Cir, 2011).

<sup>144</sup> *Northern Territory v Collins* (2008) 235 CLR 619, 626 (Gummow ACJ and Kirby J), 653–4 (Crennan J); see also, *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd* (2013) 296 ALR 50, 65 (Bennett J); *Apotex Pty Ltd v AstraZeneca AB (No 4)* (2013) 100 IPR 285, 411 (Jagot J); *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd* (2012) 291 ALR 763, 778–9 (Yates J).

<sup>145</sup> *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd* (2013) 296 ALR 50, 59 (Emmett J), 73–4 (Bennett J), 90 (Greenwood J).

<sup>146</sup> *Ibid* 59 (Emmett J).

<sup>147</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 629 F 3d 1311, 1321–2 (Fed Cir, 2011).

web support.<sup>148</sup> Given the technical nature of the defendant's software and its use, it is relatively safe to assume that these types of instructions and support would have always been provided. Moreover, assuming this is true, if the case did progress to assessing whether the defendant did 'induce' the infringing actions, then this type of evidence would be led. Consequently, given the instructions in both cases are related to performing the infringing actions, it appears that robust infringement arguments can be mounted under s 117(2)(c) as well.

Summarising the results from this analysis of s 117: the infringing uses in s 117(2)(a)–(c) all plausibly apply to the factual circumstances of *Akamai* and *McKesson*, but the threshold issues with the definition of 'product' and 'infringement' in s 117(1) mean that, overall, factual circumstances akin to *Akamai* and *McKesson* are unlikely to create supply infringement liability.

In Monotti's article on interactive claims, she did not raise the limitations that the definition of 'product' may have in creating liability for the facts from *Akamai*, nor did she raise the applicability of ss 117(2)(b) or (c). She did comment that the factual scenarios would fit into s 117(2)(a) and raised the issue of whether the definition of 'infringement' within the meaning of s 13 would operate to limit its operation.<sup>149</sup> On this last point though, Monotti was more equivocal on whether supply infringement was applicable to divided performance, arguing that the use of 'would' in s 117(1) meant that infringement could be found if the parties were acting as joint tortfeasors<sup>150</sup> — through the term 'joint tortfeasors', Monotti was referring to the common law actions of common design and procured infringement.<sup>151</sup> However, there are two problems with this argument. First, it ignores a literal interpretation of s 117 and the comments from Crennan and Hayne JJ in *Collins* stating that exploitation within s 13 is a prerequisite for supply infringement. Second, if joint tortfeasance can be proved against the defendants' actions in scenarios like those in *Akamai* or *McKesson* (as explored below), there is no reason to prove supply infringement as well.

#### D. Procured Infringement

As outlined above, two common law causes of action relevant to the facts in *Akamai* and *McKesson* have been outlined in Australian case law, namely, common design and procured infringement.<sup>152</sup> Procured infringement is discussed first in this chapter because analysis of it sheds light on the operation of common design as well. Procured infringement has a much longer history than common

<sup>148</sup> Epic, *Client Services* < <https://www.epic.com/services-index.php>>; Epic, *Contact* < <https://www.epic.com/contact.php>>.

<sup>149</sup> Ann L Monotti, 'Liability for Joint Infringement of a Method Patent Under Australian Law' (2013) 35(6) *European Intellectual Property Review* 318, 324.

<sup>150</sup> *Ibid.*

<sup>151</sup> *Ibid* 320.

<sup>152</sup> Other monikers could be used to describe these actions, see, *Unilever Plc v Gillette (UK) Ltd* [1989] RPC 583, 609 (Lord Mustill); *Molnlycke AB v Procter & Gamble Ltd (No 4)* [1992] 1 WLR 1112, 1118–9; *Caterpillar Inc v John Deere Ltd* (1999) 48 IPR 1, 9 (Carr, Sundberg and Kenny JJ). In *Unilever Plc v Gillette (UK) Ltd* [1989] RPC 583, Mustill LJ queried whether these causes of action are different but thought they were separate, see, 608; see also *Collins v Northern Territory* (2007) 161 FCR 549, 560 (French J).

design, with UK cases in the 19<sup>th</sup> century applying<sup>153</sup> and approving it.<sup>154</sup> However, a judicial comment early in the 20<sup>th</sup> century also criticised it for being of dubious authority.<sup>155</sup> In *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* ('*Ramset*'),<sup>156</sup> the unanimous Full Court of the Federal Court of Australia became the first Australian court to find procured infringement.<sup>157</sup> Interestingly, this finding was preceded by a number of Australian cases where it was considered, but not applied.<sup>158</sup> Highlighting the controversy of whether the cause of action was a part of Australian patent law, Young J in *Ryan v Lum*<sup>159</sup> stated:

tempting as it is to be the first to have the glory of deciding the point, or alternatively the infamy of having decided it wrongly, it seems to me that I should not go further than to record the arguments which have been put to me and to acknowledge the diligent research which must have gone into them and to leave the point open until it becomes absolutely necessary to decide it.<sup>160</sup>

The judgment in *Ramset* validated the existence of the cause of action and outlined its boundaries. Relevantly, the Court stated:

Liability for infringement may be established, in some circumstances, against a defendant who has not supplied a whole combination (in the case of a combination patent) or performed the relevant operation (in the case of a method patent). The necessary circumstances have been variously described: the defendant may 'have made himself a party to the act of infringement'; or participated in it; or procured it; or persuaded another to infringe; or joined in a common design to do acts which in truth infringe. All these go beyond mere facilitation. They involve the taking of some step designed to produce the infringement, although further action by another or others is also required. Where a vendor sets out to make a profit by the supply of that which is patented, but omitting some link the customer can easily furnish, particularly if the customer is actually told how to furnish it and how to use the product in accordance with the patent, the court may find the vendor has 'made himself a party to the [ultimate] act of infringement'. He has indeed procured it. So to hold is not in any way to trespass against the established line of authority which, as Dixon J made clear in *Walker v Alemite*, is based upon the need to confine a monopoly to the precise area in which it operates. That protects the mere vendor of an old product, though selling with knowledge of the purchaser's intention to infringe

<sup>153</sup> *Innes v Short* (1898) 15 RPC 449, 451–2 (Bigham J).

<sup>154</sup> See, *Gibson v Brand* (1842) 1 WPC 627, 631 (Tindal CJ); *Townsend v Haworth* (1879) 48 LJ Ch 770, 770–1 (Jessel MR); see also, *Collins v Northern Territory* (2007) 161 FCR 549, 560 (French J).

<sup>155</sup> *Adhesive Dry Mounting Co Ltd v Trapp & Co* (1910) 27 RPC 341, 353 (Parker J).

<sup>156</sup> *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239.

<sup>157</sup> *Ibid* 263.

<sup>158</sup> *Ryan v Lum* (1989) 14 IPR 513, 521–2; *BEST Australia Ltd v Aquagas Market Pty Ltd* (1988) 83 ALR 217, 220; *Ccom Pty Ltd v Jiejing Pty Ltd* 1994) 27 IPR 577, 626–7; *Bristol-Myers Squibb Co v FH Faulding & Co Ltd* (1998) 41 IPR 467, 489 (Heerey J). See also, *Wellcome Foundation Ltd v Commissioner of Patents* (1980) 145 CLR 520, 527–528; *Re Application of Eli Lilly and Co* [1982] 1 NSWLR 526, 535.

<sup>159</sup> *Ibid*.

<sup>160</sup> *Ibid* 522 (note, this argument is not recorded in the *Ryan v Lum* (1989) 16 NSWLR 518).

a combination patent; but it affords no excuse to the person who sets out to induce customers to do what falls fairly within the area of the monopoly.<sup>161</sup>

Procured infringement has been thought of as being superseded by s 117 supply infringement.<sup>162</sup> However, as described below, it may still have a role in modern litigation, and perhaps a greater role in creating liability for divided performance. An important feature of the action, especially in relation to the factual circumstances in *Akamai* and *McKesson*, is that in *Ramset* their Honours held that when a party procures another to infringe a patent, there is no need to find that the parties had a 'common design' to perform any activities.<sup>163</sup> This feature also distinguishes the action from 'common design' (discussed below).

With the passage of time, this extract from *Ramset* has been cited with approval in a number of judgements, including, by a differently constituted Full Federal Court bench to that in *Ramset*.<sup>164</sup> It has also been applied by Bennett J in *Danisco AS v Novozymes* ('*Danisco*'),<sup>165</sup> and Middleton J in *Damorgold Pty Ltd v Jai Products Pty Ltd* ('*Damorgold*').<sup>166</sup> Although it follows that there is a strong basis for the existence of procured infringement actions in Australia, there is, nevertheless, some lingering doubt from cases that pre-date *Ramset*. In the 1975 High Court decision, *Firth Industries Ltd v Polyglass Engineering Pty Ltd* ('*Firth*'),<sup>167</sup> Stephen J, sitting as a single judge on an interlocutory injunction matter, stated that procuring others to infringe a method patent by providing instructions on how to achieve the infringing acts is 'a matter open to some doubt'.<sup>168</sup> A similar sentiment was also expressed by Cooper J in *Ccom Pty Ltd v Jiejing Pty Ltd* ('*Ccom*'),<sup>169</sup> and by the High Court in 1980 case, *Wellcome Foundation Ltd v Commissioner of Patents* ('*Wellcome*').<sup>170</sup> In *Wellcome*, the unanimous High Court in obiter held that there were no authorities for establishing liability when a product is supplied with instructions to use it in a way that would infringe a method claim.<sup>171</sup> This last

<sup>161</sup> *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239, 258–9 (Burchett, Sackville and Lehane JJ) (citations omitted).

<sup>162</sup> Ann L Monotti, 'Liability for Joint Infringement of a Method Patent Under Australian Law' (2013) 35(6) *European Intellectual Property Review* 318, 322; *Collins v Northern Territory* (2007) 161 FCR 549, 562 (French J).

<sup>163</sup> *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239, 258–9, 263; *contra*, *Wake Forest University Health Sciences v Smith & Nephew Pty Ltd (No 2)* (2011) 92 IPR 496, 563 (Dodds-Streton J).

<sup>164</sup> *Collins v Northern Territory* (2007) 161 FCR 549, 562 (French J), 588–9 (Branson and Sundberg JJ); *Unilever Australia Ltd v PB Foods Ltd* [2000] FCA 798 (16 June 2000) [9] (Moore J); *Grove Hill Pty Ltd v Great Western Corp Pty Ltd* (2002) 55 IPR 257, 341 (Gyles J); *Leonardis v Theta Developments Pty Ltd* (2000) 78 SASR 376, 402–2 (Williams J); *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 115–6 (Kenny J); this case was appealed, but only on validity, not infringement, see, *SNF (Aust) Pty Ltd v Ciba Specialist Chemicals Water Treatments Ltd* (2012) 96 IPR 365, 365–6; *Wake Forest University Health Sciences v Smith & Nephew Pty Ltd (No 2)* (2011) 92 IPR 496, 563 (Dodds-Streton J). See also, *Bristol-Myers Squibb Co v FH Faulding & Co Ltd* (2000) 97 FCR 375, 559 (Black CJ and Lehane J); *McCallum & Co Pty Ltd v Allen Manufacturing Co Pty Ltd* (2001) 52 IPR 550, 556–7 (Gyles J); *Ccom Pty Ltd v Jiejing Pty Ltd* (1993) 27 IPR 577, 627 (Cooper J).

<sup>165</sup> *Danisco AS v Novozymes AS (No 2)* (2011) 91 IPR 209, 244–45.

<sup>166</sup> *Damorgold Pty Ltd v Jai Products Pty Ltd* (2014) 105 IPR 60, 72.

<sup>167</sup> *Firth Industries Ltd v Polyglass Engineering Pty Ltd* (1975) 123 CLR 489.

<sup>168</sup> *Ibid* 497.

<sup>169</sup> *Ccom Pty Ltd v Jiejing Pty Ltd* (1993) 27 IPR 577, 627 (Cooper J).

<sup>170</sup> *Wellcome Foundation Ltd v Commissioner of Patents* (1980) 145 CLR 520.

<sup>171</sup> *Ibid* 527–8; see also *Bristol-Myers Squibb Co v FH Faulding* (1998) 41 IPR 467, 489 (Heerey J).

holding is particularly problematic, since the supply of instructions are key facts in *Akamai* and *McKesson*. Also problematic is that the Courts in *Ramset*, *Dansico* and *Damorgold* did not address *Firth* or *Wellcome*. This means that although there is a clear signal from the Federal Court that the cause of action exists, the High Court is yet to definitively approve of its modern development.

Assuming procured infringement does exist, then according to the extract from *Ramset*, two elements must be proved in a successful procured infringement action: (1) that there is a physical act of infringement; and (2) that the conduct of the procuring party is sufficient to attribute infringing conduct to them. As established above, in both *Akamai* and *McKesson*, performance of the all the steps in the method claims was not in dispute, rather the question was whether steps performed by the clients could be attributed to the defendants. On this point, the extract from *Ramset* is apposite, particularly the passage, '[t]hey involve the taking of some step designed to produce the infringement, although further action by another or others is also required'. This tends to imply that if part of a patented method is completed by an alleged infringer, and a client completes the rest, this could give rise to liability. However, this interpretation is open to debate. It could also be read to only apply to two specific situations: first, where a product patent is partly assembled by one party and then completed by another; and second, where a party supplies a product to another who uses it to perform all the steps in an infringing method. Support for this alternative interpretation can be found in dicta from *Ramset*. Relevantly, their Honours specifically approved a passage from the UK case, *CBS Songs Ltd v Amstrad Consumer Electronics Plc*.<sup>172</sup> In that case, Lord Templeman, with whom all the members of the House of Lords agreed, stated, '[g]enerally speaking, inducement, incitement or persuasion to infringe must be by a defendant to an individual infringer and must identifiably procure a particular infringement in order to make the defendant liable as a joint infringer.'<sup>173</sup> *CBS Songs Ltd v Amstrad Consumer Electronics Plc* is a copyright case, but as their Honours stated in *Ramset*, 'it is necessary to bear in mind that his Lordship treated the patent cases as involving the same principle.'<sup>174</sup>

Additional support for the argument that procured infringement does not create liability for divided performance can also be found in the three cases that have found procured infringement in Australia: *Ramset* concerned the supply of 'face-lift anchors' and 'ring clutches' to customers who used them to make patented construction apparatuses;<sup>175</sup> *Dansico* concerned the supply of an enzyme to customers who used it to perform all the steps in an infringing baking process;<sup>176</sup> and *Damorgold* concerned the supply of 'springs assists' to customers who used them to make patented

<sup>172</sup> *CBS Songs Ltd v Amstrad Consumer Electronics Plc* [1988] 2 ALL ER 484.

<sup>173</sup> *Ibid* 496–7.

<sup>174</sup> *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239, 256.

<sup>175</sup> *Ibid* 243, 252, 258–65.

<sup>176</sup> *Dansico AS v Novozymes AS (No 2)* (2011) 91 IPR 209, 237–45.

window blind control apparatuses.<sup>177</sup> Thus, in each case, the person who was supplied with the item exploited the claimed invention by making the patented apparatus or performing all the steps in the patented method — liability was not found in circumstances of divided performance. As such, there is no Australian precedent for finding procured infringement in circumstances of divided performance. But, by the same token though, nor is there precedent denying it.

If it is assumed that procured infringement exists and it is applicable to divided performance, the second issue is whether conduct equivalent to that of the defendants in *Akamai* and *McKesson* would be sufficient to be classified as ‘procuring’ infringement. In *Ramset*, the infringer supplied construction components together with instructions in brochures, bulletins and personal seminars demonstrating how to make the infringing apparatuses.<sup>178</sup> In *Danisco*, supply of the enzyme was supported by advice, presentations on the benefits of the enzyme and personal contact with customers.<sup>179</sup> In *Damorgold*, the supply of window blind components was supported by various ‘directions, recommendations and instructions’, all in a situation where the components only had one use.<sup>180</sup>

Lamentably, facts surrounding the provision of CDN services in *Akamai* and provision of the software in *McKesson* are scant because the cases focused on the single entity issue rather than the broader circumstances of inducement. Nevertheless, the written reasons for the decisions concerning the facts in *Akamai* do make it clear that, in addition to the defendant supplying the CDN service, they provided specific instructions on how to tag web objects and associated technical support.<sup>181</sup> Moreover, in the circumstances of clients using the defendant’s CDN service, there was no possibility for them to obtain the benefits of that service without tagging.<sup>182</sup> As outlined above, in *McKesson*, no facts were provided in the written decision pertaining to instructions or technical support. Despite this, the defendant’s current website details a wide variety of support for using the software,<sup>183</sup> and it is logical to assume that if the case progressed to considering ‘inducing’ conduct, evidence of this type would be led. The facts from the case do indicate that the software had a non-infringing use, namely, it allowed hospitals to link patient records to a patient’s website.<sup>184</sup> However, it is also clear that the primary purpose of the software was to allow patients to access the website and to

<sup>177</sup> *Damorgold Pty Ltd v Jai Products Pty Ltd* (2014) 105 IPR 60, 61–2, 65–70, 72–3.

<sup>178</sup> *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239, 261–3. The Court also appeared to attribute increased weight to the instructions since the components were used in dangerous work, see *ibid* 261–2.

<sup>179</sup> *Danisco AS v Novozymes AS (No 2)* (2011) 91 IPR 209, 245–6.

<sup>180</sup> *Damorgold Pty Ltd v Jai Products Pty Ltd* (2014) 105 IPR 60, 72.

<sup>181</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 614 F sup 2d 90, 122 (D Mass, 2009); *Limelight Networks Inc v Akamai Technologies Inc*, 134 S Ct 2111, 2115 (2014); *Akamai Technologies Inc v Limelight Networks Inc* (Fed Cir, 2015 Nos 06-CV-11585, 06-CV- 11109, 13 August 2015) slip op 9.

<sup>182</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 614 F sup 2d 90, 122 (D Mass, 2009); *Akamai Technologies Inc v Limelight Networks Inc* (Fed Cir, 2015 Nos 06-CV-11585, 06-CV- 11109, 13 August 2015) slip op 8–9.

<sup>183</sup> Epic, *Client Services* < <https://www.epic.com/services-index.php>>; Epic, *Contact* < <https://www.epic.com/contact.php>>.

<sup>184</sup> *McKesson Technologies Inc v Epic Systems Corp* (ND Ga, Civ No 06-CV-2965, 8 September 2009) slip op 2.

communicate with healthcare providers.<sup>185</sup> Thus, in both cases the defendants deliberately created scenarios which meant that when their product (or services) were used for their designed purpose, it would result in all the steps of the method patents being performed. Moreover, in both circumstances, instructions were provided to relevant parties detailing how to perform their part. In these respects, then, both cases are quite similar to *Damorgold*, in the sense that a high level of support was supplied for the infringing use, and what was being supplied only had one reasonable use, and that use was infringing. As a result, for factual circumstances mirroring those in *Akamai* and *McKesson*, there appears a strong basis for a finding of procured infringement in Australia.

#### E. Common Design Infringement

The second common law cause of action canvassed in this chapter, common design, has been described as originating in the UK case, *Morton-Norwich Products v Intercen Ltd* ('*Morton-Norwich*').<sup>186</sup> In that case, Graham J outlined the cause of action,<sup>187</sup> and his Honour's judgment is generally considered instructive on its dimensions.<sup>188</sup> Relevantly, his Honour stated, 'two persons who agree on common action in the course of and to further which one of them commits a tort in this country are joint tortfeasors.'<sup>189</sup> In the later Court of Appeal case, *Unilever Plc v Gillette (UK) Ltd*,<sup>190</sup> Lord Mustill, with whom the rest of the Court agreed,<sup>191</sup> expanded on this point stating, there is no 'no need for a common design to infringe. It is enough if the parties combine to secure the doing of acts which in the event prove to be infringements.'<sup>192</sup> Consistent with this passage, Lord Mustill emphasised that a key element of the suit was the nature of the relationship between alleged joint tortfeasors.<sup>193</sup> Furthermore, his Honour explained that a common design to commit actions is not found based on the classification of a relationship, but on an analysis of various features of it.<sup>194</sup>

In Australian patent law, common design has been argued in three general fact scenarios. These are: (1) whether a parent company can be liable for a subsidiary's infringement by exploitation;<sup>195</sup> (2) whether a supplier can be liable for a distributor's infringement by exploitation;<sup>196</sup> and (3) whether a

<sup>185</sup> Ibid slip op 2; *McKesson Technologies Inc v Epic Systems Corp*, 98 USPQ 2d (BNA) 1281 [2]–[4] (Fed Cir, 2011).

<sup>186</sup> *Morton-Norwich Products v Intercen Ltd* [1978] RPC 501; *Molnlycke AB v Procter & Gamble Ltd (No 4)* [1992] 1 WLR 1112, 1118; *Caterpillar Inc v John Deere Ltd* (1999) 48 IPR 1, 10 (Carr, Sundberg and Kenny JJ); Ann L Monotti, 'Liability for Joint Infringement of a Method Patent Under Australian Law' (2013) 35(6) *European Intellectual Property Review* 318, 321.

<sup>187</sup> Ibid 512–7.

<sup>188</sup> See, *Apotex Pty Ltd v Les Laboratoires Servier (No 2)* (2012) 293 ALR 272, 277; *Bayer Pharma Aktiengesellschaft v Genentech Inc* (2012) 98 IPR 424, 429.

<sup>189</sup> *Morton-Norwich Products v Intercen Ltd* [1978] RPC 501, 512, see also, 515.

<sup>190</sup> *Unilever Plc v Gillette (UK) Ltd* [1989] RPC 583.

<sup>191</sup> Ibid 611.

<sup>192</sup> Ibid.

<sup>193</sup> Ibid 608–9.

<sup>194</sup> Ibid; see also, *Caterpillar Inc v John Deere Ltd* (1999) 48 IPR 1, 13 (Carr, Sundberg and Kenny JJ); *Apotex Pty Ltd v Les Laboratoires Servier (No 2)* (2012) 293 ALR 272, 277–8; *Bayer Pharma Aktiengesellschaft v Genentech Inc* (2012) 98 IPR 424, 428–32.

<sup>195</sup> See, eg, *Murex Diagnostics Australia Pty Ltd v Chiron Corp* (1994) 55 FCR 194, 205; *Best Australia Ltd v Aquagas Marketing Pty Ltd* (1988) 83 ALR 217.

<sup>196</sup> See eg, *Morton-Norwich Products v Intercen Ltd* [1978] RPC 501, 510–11; see *Apotex Pty Ltd v Les Laboratoires Servier (No 2)* (2012) 293 ALR 272, 273; *Bayer Pharma Aktiengesellschaft v Genentech Inc* (2012) 98 IPR 424, 428; *Caterpillar Inc v*



supplier can be made liable for a client's exploitation of the invention.<sup>197</sup> However, in all instances, it is well accepted that merely facilitating infringement is not enough. For example, supplying an element of an invention and knowing that a person supplied will infringe, will not establish liability, rather, (in a similar manner to procured infringement) something more than facilitation must occur, relevantly, a party must have 'itself a party to the act of infringement...'.<sup>198</sup> In *Morton-Norwich*, this was found when a UK importer and Dutch distributor met regularly and formed a close working relationship to import a product into the UK that infringed a UK patent.<sup>199</sup>

The infringement arguments in *Akamai* and *McKesson* were both aimed at making the defendant responsible for its client's actions. In this context, then, two requirements emerge that must be proven for a finding of infringement: (1) whether the features of the relationships are sufficient to be classified as a common design; and (2) whether common design infringement can create liability for divided performance. On the first question, whether the relationships in the factual scenarios are sufficient to be classified as a common design, there are two relevant Australian cases that have been argued in the context of making suppliers responsible for their client's infringement. Both of which have already been mentioned in this chapter: *Ccom*,<sup>200</sup> and *SNF*.<sup>201</sup> In *Ccom*, the applicant controlled petty patent rights for a Chinese text display computer program.<sup>202</sup> In this case, although Cooper J found the petty patent in question was invalid on a number of grounds, including subject matter and fair basing,<sup>203</sup> his Honour continued to consider infringement. Assuming the clients who used the respondent's program were infringers by exploitation, his Honour considered whether supply of the program coupled with an instruction manual could constitute infringement.<sup>204</sup> On this point, Cooper J stated that, without more, sale of the software with instructions was not sufficient to support a finding of a 'common design' between the parties.<sup>205</sup>

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*John Deere Ltd* (1999) 48 IPR 1, 10 (Carr, Sundberg and Kenny JJ). In other intellectual property regimes it has also been used to make a director of a company personally liable for his or hers company's infringement, see, eg, *Sporte Leisure Pty Ltd v Paul's International Pty Ltd* (No 3) (2010) 275 ALR 258, 277, or in copyright, *Cooper v Universal Music Australia Pty Ltd* (2006) 237 ALR 714, 749.

<sup>197</sup> See eg, *Ccom Pty Ltd v Jiejing Pty Ltd* (1993) 27 IPR 577, 626; *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 119.

<sup>198</sup> *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 116 (Kenny J); *Walker v Alemite Corp* (1933) 49 CLR 643, 658 (Dixon J, McTiernan J agreeing: at 659); quoted with approval in regards to common design in, *Collins v Northern Territory* (2007) 161 FCR 549, 560 (French J); *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239, 258–9 (Burchett, Sackville and Lehane JJ).

<sup>199</sup> *Morton-Norwich Products v Intercen Ltd* [1978] RPC 501, 514.

<sup>200</sup> *Ccom Pty Ltd v Jiejing Pty Ltd* (1993) 27 IPR 577 (the infringement arguments are not recorded in *Ccom Pty Ltd v Jiejing Pty Ltd* (1993) 48 FCR 41).

<sup>201</sup> *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46; see also, *Danisco AS v Novozymes AS* (No 2) (2011) 91 IPR 209, 244–45; C.f. *Rotocrop International Ltd v Genbourne Ltd* [1982] FSR 241.

<sup>202</sup> *Ccom Pty Ltd v Jiejing Pty Ltd* (1993) 27 IPR 577; this case was appealed, however, common design was not pursued, see, *Ccom Pty Ltd v Jiejing Pty Ltd* (1994) 51 FCR 260, 272–75 (Spender, Gummow and Heerey JJ).

<sup>203</sup> *Ibid* 577–9.

<sup>204</sup> *Ibid* 626.

<sup>205</sup> *Ibid*.

In *SNF*, the relevant patent concerned the use of polymers in treating mining waste.<sup>206</sup> The case was initiated by an applicant seeking to revoke the patent,<sup>207</sup> and the respondent cross claimed for various types of infringement including common design.<sup>208</sup> In all, Kenny J found that the patent was valid and infringed.<sup>209</sup> As in *Ccom*, common design was argued on the basis that the alleged infringer supplied the polymers in question and provided instructions on how to use them to contravene the patent.<sup>210</sup> However, in addition to these facts, her Honour found that the suppliers engaged in a 'joint endeavour' with the mine operator.<sup>211</sup> This included, developing a management strategy for treating the waste,<sup>212</sup> as well as ongoing testing, optimisation, and advice.<sup>213</sup>

In *Akamai*, the alleged infringer supplied instructions and technical support on how to use its CDN and tag web objects, but there is no evidence of a relationship like the 'joint endeavour' in *SNF*, thus the facts appear more akin to *Ccom*. Indeed, in the trial decision, the trial judge specifically described the relationship as one at arm's-length.<sup>214</sup> As a result, it seems unlikely that a 'common design' would be found on the basis of the facts in *Akamai*. The analyses of the relationships between software provider, healthcare providers and patients in *McKesson* is similar. There was no evidence of anything more than arm's-length relationships.<sup>215</sup> Accordingly, it seems unlikely that a common design would be found on the facts from *McKesson* too.

On the second issue of whether common design is applicable to divided performance, in Graham J's articulation of common design in *Morton-Norwich*, his Honour stated that common design infringement could arise when a common design is reached between two parties 'and to further one of them commits a tort ...'.<sup>216</sup> A literal reading of this passage suggests that common design is only applicable to scenarios where one party commits infringement by exploitation. Relevantly, in the Australian context, this passage was specifically approved of by Bennett J in *Apotex v Les Laboratoires Servier (No 2)*.<sup>217</sup> However, despite these comments, there are good counter-arguments suggesting they may not exhaustively represent the law in Australia. First, in *Morton-Norwich*, a Dutch corporation supplied a UK company an animal medicament that was patented in the UK.<sup>218</sup> The UK company then directly infringed the UK patent by importing and selling the medicament in

<sup>206</sup> *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 46; this case was appealed, but only on validity, not infringement, see, *SNF (Aust) Pty Ltd v Ciba Specialist Chemicals Water Treatments Ltd* (2012) 96 IPR 365, 365–6. The case actually concerned five patents however the litigants agreed that the differences between them were 'immaterial' and conducted the case using one as an 'exemplar': see, 56.

<sup>207</sup> *SNF (Australia) v Ciba Special Chemicals Water Treatments Ltd* (2011) 92 IPR 46, 46.

<sup>208</sup> *Ibid* 47.

<sup>209</sup> *Ibid*.

<sup>210</sup> *Ibid*.

<sup>211</sup> *Ibid* 118.

<sup>212</sup> *Ibid* 118–9.

<sup>213</sup> *Ibid*.

<sup>214</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 614 F supp 2d 90, 122 (D Mass, 2009).

*McKesson Technologies Inc v Epic Systems Corp*, 98 USPQ 2d (BNA) 1281 [7]–[12] (Fed Cir, 2011).

<sup>216</sup> *Morton-Norwich Products v Intercen Ltd* [1978] RPC 501, 512, see also, 515.

<sup>217</sup> *Apotex v Les Laboratoires Servier (No 2)* (2012) 293 ALR 272, 277.

<sup>218</sup> *Morton-Norwich Products v Intercen Ltd* [1978] RPC 501, 510–1.

that jurisdiction.<sup>219</sup> Thus, Graham J's statement of the law was suited to the facts, and it was not necessary to consider the irrelevant, and perhaps difficult to perceive scenario, of divided performance. Second, as the extract (above) from the unanimous Full Court in *Ramset* indicates, their Honours reviewed common law patent infringement as a whole in their decision, and referenced common design in the same paragraph when they stated that infringement can occur when 'further action by another or others is also required'. Accordingly, the arguments detailed above on whether procured infringement applies to divided performance, are also relevant to common design. It follows, then, that like the conclusion drawn above for procured infringement, it is not clear whether common design can create liability in circumstances of divided performance.

In Monotti's article on infringement of method claims by separate parties, she does not analyse whether the factual circumstances regarding the relationships between the defendants and clients in *Akamai* or *McKesson* are sufficient to be classified as a common design.<sup>220</sup> Similarly, she does not consider whether common design is applicable to divided performance. Rather, she appears to assume that if a common design relationship can be proved then the divided performance can be attributed to two parties.<sup>221</sup> The arguments here present a more nuanced assessment of common design law. They also indicate that, in reference to establishing infringement liability for the facts from *Akamai* and *McKesson*, the relationships in the cases are unlikely to constitute a 'common design' and therefore unlikely to create liability.

#### F. Conclusion on Australian Causes of Action

The examination of Australian infringement actions in this part highlights weaknesses in the applicability of each of them to the factual circumstances in *Akamai* and *McKesson*. Notably, none of them clearly apply to divided performance. Despite this finding, the arguments surrounding the applicability of common design and procured infringement suggest that they are more likely to be amenable to creating liability for divided performance than the statutory infringement causes of action. Nevertheless, common design is unlikely to create liability because the relationships in each of the two cases are at arm's-length and do not compel any infringing actions. On the other hand, the fact matrices in both cases are akin to previous procured infringement cases and therefore strong arguments can be raised supporting a finding of liability. There is a remaining issue of whether procured infringement would be recognised by the High Court, but given its broad application by members of the Federal Court, this appears to be more of a formality.

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<sup>219</sup> Ibid 511.

<sup>220</sup> Ann L Monotti, 'Liability for Joint Infringement of a Method Patent Under Australian Law' (2013) 35(6) *European Intellectual Property Review* 318, 320–3.

<sup>221</sup> Ibid.

### III. Should the Factual Scenarios from *Akamai* and *McKesson* Constitute Infringement in Australia?

Theoretically, if the Australian courts or legislature decide that it would be appropriate to find infringement liability in circumstances akin to those in *Akamai* and *McKesson*, it could be achieved by various means. These means include creating a new head of liability, or altering the operation of a current causes of action. However, the analysis in part 2 of this chapter illustrates that no specific barriers have been raised to the applicability of procured infringement, only uncertainties in its application. Arguably, then, significant changes to the current law are not warranted until it is established that procured infringement does not create liability.<sup>222</sup> On the other hand, an alternative approach to the current situation is to codify procured infringement in the *Patents Act*, specifying that it does apply to divided performance. Indeed, this approach makes sense, as altering the current operation of the law in any marked way is undesirable as it alters current expectations, but codifying the law will not result in a significant change, and it will serve to more clearly demarcate rights. Before this is done though, two policy aspects of the law would need to be demonstrated to show that it is preferable, namely: (1) that liability for divided performance is desirable; and (2) that codification of procured infringement, as opposed to relying on the common law to find its own way, is warranted. In this context, then, this part considers the policy arguments for the first aspect under the conventional headings of ‘for’ and ‘against’. Then, finding the arguments that support liability more compelling, this part proceeds to consider the second aspect.

#### A. Arguments For

One of the primary rationales for instituting patent regimes is that the creation of legally enforceable rights in inventions incentivises innovation and commercialisation.<sup>223</sup> A corollary of this, as Giles Rich, a key draftsman of the US patent infringement provisions and Federal Circuit judge from 1982 to 1999 stated,<sup>224</sup> ‘[w]eaken or destroy the monopoly and you weaken or destroy the system’.<sup>225</sup> It

<sup>222</sup> A preference for the applicability of procured infringement to the facts from *Akamai* and *McKesson* has also been supported by: Brett M Jackson, ‘Bridging the (Liability) Gap: The Shift Toward Sec 271(b) Inducement in *Akamai* Represents a Partial Solution to Dividend Infringement’ (2012) 54 *Boston College Law Review* 2127; Reza Dokhanchy, ‘Cooperative Infringement: I Get By (Infringement Laws) With a Little Help From My Friends’ (2011) 26 *Berkeley Technology Law Journal* 135, 163–69.

<sup>223</sup> See generally, Introduction, pt II; Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 11–4; Intellectual Property and Competition Review Committee, *Review of Intellectual Property Legislation under the Competition Principles Agreement Final Report* (IP Australia, Phillip, 2000) 22–4; William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 12–3; Merges, Menell and Lemley, *Intellectual Property in the New Technological Age* (6<sup>th</sup> ed, 2012) 11–3; Edmund W Kitch, ‘The Nature and Function of the Patent System’ (1977) 20 *Journal of Law and Economics* 265, 266–71; Joshua S Gans, Philip L Williams, and David Briggs, ‘Intellectual Property Rights: A Grant of Monopoly or an Aide to Competition?’ (2004) 37(4) *The Australian Economics Review* 436, 437–8.

<sup>224</sup> Giles S Rich, ‘Congressional Intent-Or, Who Wrote the Patent Act of 1952?’, in *Patent Procurement and Exploitation: Protecting Intellectual Rights* (Southwestern Legal Foundation, 1963) 61–78. See generally, Giles S Rich, ‘Infringement Under Section 271 of the Patent Act of 1952’ (1953) 35 *Journal of the Patent Office Society* 476.

<sup>225</sup> Giles S Rich, ‘Infringement Under Section 271 of the Patent Act of 1952’ (1953) 35 *Journal of the Patent Office Society* 476, 479.

follows that if classes of patents are unenforceable, or if there is ambiguity about whether they are enforceable, then the incentive that the patent system is designed to create may diminish for certain technologies.<sup>226</sup> As discussed at the end of part 1 of this chapter, the lack of protection for divided infringement potentially creates a ‘loophole’ for parties who are not authorised by the patentee to take advantage of particular types of modern technological inventions. These economic arguments are quite strong – especially given that they are the same arguments that underpin the patent system itself<sup>227</sup> – thus they form a sound reason to find liability in circumstances akin to *Akamai* and *McKesson*. However, this rationale for liability does not necessarily conclude the issue. There are other factors that must be considered.

### B. Arguments Against

A number of arguments against finding procured infringement liability in circumstances akin to those in *Akamai* and *McKesson* have been raised in US case law.<sup>228</sup> Of these, two are relevant in the Australian context: (1) the use of ‘unitary claims’ makes it unnecessary; and (2) it is open to abuse. Each of these arguments will be addressed in turn.

In an article by Lemley et al addressing divided performance, the authors argue that the lack of enforceability can be remedied by drafting ‘unitary claims’.<sup>229</sup> As explained in the article, ‘unitary claims’ are ones that are drafted from the point of view of one actor.<sup>230</sup> For example, in a claim that includes a client and a supplier, it can be re-drafted to focus only on the supplier. That is, if a claim originally included a step similar to, ‘a client transmits a request’, it can be changed to ‘a supplier receives a request’.<sup>231</sup> Relevantly, a preference for unitary claims was articulated by Linn J in his Honour’s dissenting opinion in the first *en banc* decision concerning the facts from *Akamai* and

<sup>226</sup> For a similar argument see, Stacie L Greskowiak, ‘Joint Infringement after BMC: The Demise of Process Patents (2010) 41 *Loyola University Chicago Law Journal* 351, 397–405; Erik P Harmon, ‘Promoting the Progress of Personalized Medicine: Redefining Infringement Liability for Divided Performance of Method Patents 967 (2014) 42 *Hofstra Law Review* 967, 977–81.

<sup>227</sup> Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 11–4; Intellectual Property and Competition Review Committee, *Review of Intellectual Property Legislation under the Competition Principles Agreement Final Report* (IP Australia, Phillip, 2000) 22–4; William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 12–3; Merges, Menell and Lemley, *Intellectual Property in the New Technological Age* (6<sup>th</sup> ed, 2012) 11–3; Edmund W Kitch, ‘The Nature and Function of the Patent System’ (1977) 20 *Journal of Law and Economics* 265, 266–71; Joshua S Gans, Philip L Williams, and David Briggs ‘Intellectual Property Rights: A Grant of Monopoly or an Aide to Competition?’ (2004) 37(4) *The Australian Economics Review* 436, 437–8.

<sup>228</sup> See, *BMC Resources Inc v Paymentech*, 498 F 3d 1373, 1381 (Fed Cir, 2007); *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301, 1326–33, 1338–50 (Fed Cir, 2012) (citations omitted). The arguments concerning statutory construction, legislative history, tort and criminal law are not considered in this chapter because they are unique to the US.

<sup>229</sup> Lemley et al, ‘Divided Infringement Claims’ (2005) 33 *American Intellectual Property Law Association Quarterly Journal* 255, 272–5.

<sup>230</sup> *Ibid.*

<sup>231</sup> For a more thorough examples, see *ibid* 272–3; see also, Dolly Wu, ‘Joint infringement and Internet Software Patents: An Uncertain Future?’ (2009) 91 *Journal of the Patent and Trademark Office Society* 439, 449, 446–7; see also, Ken Hobday, ‘The Incredibly Ever-Shrinking Theory of Joint Infringement: Multi-Actor Method Claims’ (2009–2010) 38 *Capital Law Review* 137, 141–45.

*McKesson* (in which 3 other judges joined).<sup>232</sup> On this point Linn J stated, it 'is unwise to overrule decades of precedent in an attempt to enforce poorly-drafted patents.'<sup>233</sup> The primary feature of unitary claims is that, because they are able to be infringed by one party, issues related to divided performance are irrelevant. Accordingly, in some patents that involve interactive claims, it may be prudent for patentees to include unitary claims. However, for various reasons explored below they are unlikely to be a panacea to divided performance and may actually be detrimental.<sup>234</sup>

In *BMC Resources Inc v Paymentech*,<sup>235</sup> Rader CJ writing for the unanimous Federal Circuit commented that unitary claims could capture many instances of divided performance, but his Honour acknowledged that, for inventions that involve more than three separate parties, it would be difficult to prove infringement when such an invention was in the form of a unitary claim.<sup>236</sup> In commentary to this case, Long Truong, a patent attorney, illustrates this issue with a US patent on networked data processes, and, in this scenarios goes on to suggest that it is not possible to describe the invention from the perspective of one party.<sup>237</sup> Related to this issue is a point originally made by Melissa Wasserman, who argues that if an invention is novel or inventive because of the way it divides performance of a method between different parties, then if claimed in unitary form it may not be patentable because the claim will not recite its inventive features.<sup>238</sup> Following this, Wasserman goes on to argue that, if unitary claims are of dubious validity, patent applicants will likely include them alongside interactive claims, and that the outcome of including both types of claims is that it will increase the number of claims patent offices need to examine.<sup>239</sup> A further aspect of this issue, not mentioned by Wasserman, is that some patent offices charge significant additional fees for claims over a certain number. For example, in the European Patent Office each claim numbered 16 to 50 costs an additional €235 on top of normal examination fees, and for claims

<sup>232</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301, 1337, 1349–50 (Fed Cir, 2012).

<sup>233</sup> *Ibid* 1349–50.

<sup>234</sup> See eg, Dolly Wu, 'Joint infringement and Internet Software Patents: An Uncertain Future?' (2009) 91 *Journal of the Patent and Trademark Office Society* 439, 466–7; Long Truong, 'After *BMC Resources Inc v Paymentech LP*: Conspiratorial Infringement as a Means of Holding Joint Infringers Liable' (2009) 103 *Northwestern University Law Review* 1897, 1920; Sriranga Veeraraghavan, 'Joint Infringement of Patent Claims: Advice for Patentees' (2006) 23 *Santa Clara Computer & High Tech Law Journal* 211, 232 n 181; For a similar argument see, Stacie L Greskowiak, 'Joint Infringement after *BMC*: The Demise of Process Patents' (2010) 41 *Loyola University Chicago Law Journal* 351, 404–6; Stephen W Moore, 'A Last Step Rule for Direct Infringement of Process Claims: Clarifying Indirect Infringement and Narrowing Joint Infringement' (2013) 61 *Cleveland State Law Review* 827, 848.

<sup>235</sup> *BMC Resources Inc v Paymentech*, 498 F 3d 1373 (Fed Cir, 2007).

<sup>236</sup> *Ibid* 1381.

<sup>237</sup> Long Truong, 'After *BMC Resources Inc v Paymentech LP*: Conspiratorial Infringement as a Means of Holding Joint Infringers Liable' (2009) 103 *Northwestern University Law Review* 1897, 1919–20.

<sup>238</sup> Melissa Feeney Wasserman, 'Divided Infringement: Expanding the Extraterritorial Scope of Patent Law' (2007) 82 *New York University Law Review* 281, 300–1; see also, Long Truong, 'After *BMC Resources Inc v Paymentech LP*: Conspiratorial Infringement as a Means of Holding Joint Infringers Liable' (2009) 103 *Northwestern University Law Review* 1897, 1919–20; Sriranga Veeraraghavan, 'Joint Infringement of Patent Claims: Advice for Patentees' (2006) 23 *Santa Clara Computer & High Tech Law Journal* 211, 232 n 181; Nari Lee, 'Fragmented Infringement of Computer Program Patents in the Global Economy' (2008) 48 *IDEA* 345, 349; W Keith Robinson, 'No "Direction" Home: An Alternative Approach to Joint Infringement' (2012) 62 *American University Law Review* 59, 105–6.

<sup>239</sup> Melissa Feeney Wasserman, 'Divided Infringement: Expanding the Extraterritorial Scope of Patent Law' (2007) 82 *New York University Law Review* 281, 301.

numbered 51 and over, each claim costs an additional €580.<sup>240</sup> Thus, in addition to the usual examination costs, patents with 16 claims or more become quite expensive.

If divided performance does not constitute liability in Australia, then, in addition to applicants adding unitary claims to their applications, current patentees may want to amend their specifications to include them. In Australia, this can only occur if an amended claim ‘fall[s] within the scope of the claims of the specification before amendment’.<sup>241</sup> In effect, this requires that the new claims would constitute infringement of the old claims.<sup>242</sup> This legal test is problematic for unitary-claim amendments because if interactive claims cannot be infringed by a single entity, logic seems to dictate that unitary claims, which focus on one entity, will not fall within the scope of interactive claims. Or, demonstrating this problem on a claim integer level, if claims prior to an amendment include a step of a ‘client sending a request’ and a new claim does not specify a client doing this, it is difficult to say that the old step is performed and the claim infringed. As a result, if a current patent only consists of interactive claims, then it may be difficult for a patentee to be able to amend it to include unitary claims, and therefore the invention may be disclosed but unenforceable against parties who utilise it.

More generally, it seems inappropriate to create an invention, describe it as thoroughly as possible in a patent specification, claim the way it works in the clearest and broadest claim language possible, then have to morph it into something else to fit a legal rule that serves limited utility. Indeed, this commentary resonates with dicta from Newman J in her Honour’s dissenting judgment in the first *en banc* decision concerning induced infringement:

I do not discourage ingenuity, but the presence or absence of infringement should not depend on cleverness or luck to satisfy a malleable single-entity rule. The Court in *Dawson Chemical Co v Rohm & Haas Co*, 448 US 176 (1980), discussing the law of contributory infringement, cautioned lest ‘the technicalities of patent law’ enable persons ‘to profit from another’s invention’ by performing ‘acts designed to facilitate infringement by others’.<sup>243</sup>

It follows that unitary claims will likely be useful in many circumstances, but should not be relied upon as a solution to create liability for divided performance.

The second argument against procured infringement creating liability for factual scenarios akin to those in *Akamai* and *McKesson*, is that liability for divided performance via procurement is open to ‘abuse’. This argument was outlined by Newman J in the first *en banc* decision too. Her Honour’s

<sup>240</sup> European Patent Office, *Schedule of Fees*, EPO Online, <<http://www.epoline.org/portal/portal/default/epoline.Scheduleoffees>>.

<sup>241</sup> *Patents Act 1990* (Cth) s 102(2)(a); see also Dolly Wu, ‘Joint infringement and Internet Software Patents: An Uncertain Future?’ (2009) 91 *Journal of the Patent and Trademark Office Society* 439, 462–3.

<sup>242</sup> *Boehringer Ingelheim International GmbH* [2000] FCA 1918 (22 December 2000) [18]–[19] (Heerey J).

<sup>243</sup> *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301, 1325 (Fed Cir, 2012) (citations omitted).

primary argument, was that the conduct that may constitute procured infringement is too broad.<sup>244</sup> In particular her Honour commented that the ‘potential for abuse looms large, for the majority does not require proof of direct infringement, but holds that the entity that advises or enables or recommends the divided [performance] is fully responsible for the consequences of the direct infringement.’<sup>245</sup> However, whilst this concern may be applicable in the US, in Australia, the threshold that needs to be proved to attribute infringing conduct to another, via procured infringement, is quite high. Re-iterating a point already made, the Court in *Ramset* said mere facilitation is not enough for procured infringement, an infringer must effectively make themselves part of the infringing conduct.<sup>246</sup> Demonstrating this high threshold, the case of *Ccom* indicates that merely supplying a product and providing instructions on how to use the product in an infringing way is not enough; something more must occur.<sup>247</sup>

### C. Conclusion on Policy Arguments

Overall, the analysis of policy issues in this part suggests that there are valid arguments to be made concerning unitary claims and abuse, but, when considered in context, they do not overcome the economic rationale. As a result, from the point of view of the policy arguments presented here, procured infringement should create liability when factual circumstances akin to those in *Akamai* and *McKesson* arise in Australia. In light of this conclusion, and with reference to the uncertainties outlined in part 2 of this chapter, the next logical question is whether procured infringement should be codified to clarify its operation, or whether the common law should be left to find its own path?

### D. Codify Procured Infringement?

One of the general arguments for codification is that the common law evolves slowly, in a piecemeal approach, does not necessarily use comprehensive policy to guide it, and relies heavily on legal precedent. As Professor Dratler, the author of two US treatises on intellectual property,<sup>248</sup> has observed:

common law decision making is inevitably *ad hoc*. It relies on general principles of justice and common sense. Its tools are analogy and distinction based on facts. By using these tools, courts mimic—on a much smaller scale and for a much smaller subset of factual contingencies—the comprehensive factual inquiries that legislatures are supposed to undertake before prescribing more comprehensive and general rules in statutes.<sup>249</sup>

<sup>244</sup> Ibid 1333.

<sup>245</sup> Ibid.

<sup>246</sup> *Ramset Fasteners (Aust) Pty Ltd v Advanced Building Systems Pty Ltd* (1999) 164 ALR 239, 253, 258.

<sup>247</sup> *Ccom Pty Ltd v Jiejing Pty Ltd* (1993) 27 IPR 577, 626.

<sup>248</sup> See, Law Journal Press, *Intellectual Property Law: Commercial, Creative and Industrial Property*; Law Journal Press, *Licensing Intellectual Property*.

<sup>249</sup> Jay R Dratler, ‘Common-Sense (Federal) Common Law Adrift in a Statutory Sea, or Why *Grokster* Was a Unanimous Decision’ (2005) 22(3) *Santa Clara High Technology Journal* 413, 420.



Related to Dratler's arguments, Chief Justice French, writing extra-curially, has stated that the primary purpose of a court is to interpret and apply the law, and that courts are often reluctant to engage with policy.<sup>250</sup> Pursuant to French CJ's and Dratler's comments, then, codification presents the opportunity to clarify liability in circumstances like those raised in *Akamai* and *McKesson*, as well as providing the opportunity to craft procured infringement laws consistent with patent policy. This second point is important because, beyond the arguments in this chapter, there are various aspects of procured infringement law that are not necessarily clear and which warrant review from a policy perspective. For example, the US equivalent of procured infringement, induced infringement, requires a mental element,<sup>251</sup> should it in Australia?<sup>252</sup> Similarly, should liability or remedies be altered if parties hold a bona fide belief a patent was invalid?<sup>253</sup> Related to these issues, it might also be useful to have clarification on how joint and several liability and remedies operate when procured infringement is found with multiple parties.<sup>254</sup>

Another advantage of legislation is that it can clarify rights immediately. This means that the time and effort that may go into arguing legal or factual aspects of cases analogous to *Akamai* and *McKesson* before various courts could be avoided, as would any uncertainty that may permeate legal advice. Consistent with this advantage, the Australian Law Reform Commission has previously stated that, '[t]he first way to reduce the cost [of litigation] is to eliminate the opportunity for disputes to arise. Uncertainty or obscurity of the law may contribute to the existence of a dispute.'<sup>255</sup> Despite this, an issue that complicates this advantage is, if procured infringement was to be codified, feedback from stakeholders would be needed on whether it should only have prospective effect, or whether it should have retrospective effect as well. Although it would be desirable only to have one law relating to procured infringement, if, beyond the divided performance issue, patentees believed that the codified cause of action changed what they thought their rights were, it may be a good idea to limit the provision to a prospective effect.

<sup>250</sup> See generally, Robert S French, 'Dolores Umbridge and Policy as Legal Magic' (2008) 82 *Australian Law Journal* 322.

<sup>251</sup> See generally, *Global-Tech Appliances Inc v SEB SA*, 131 S Ct 2060 (2011).

<sup>252</sup> This topic has received a lot of commentary in the US, see, Mark Lemley, 'Inducing Patent Infringement' (2005) 39 *University of California Davis Law Review* 225; Tal Kedem, 'Secondary Liability for Actively Inducing Patent Infringement: Which Intentions Pave the Road?' (2007) 48 *William and Mary Law Review* 1465; Michael N Rader, 'Toward a Coherent Law of Inducement to Infringe: Why the Federal Circuit Should Adopt the *Hewlett-Packard* Standard for Intent Under s 271(b)' (2000–2001) 10 *Federal Circuit Bar Journal* 299, 320–6; Timothy R Holbrook, 'The Intent Element of Induced Infringement' (2006) 22 *Santa Clara Computer & Higher Technology Law Journal* 399, 404–7; Jason A Rantanen, 'An Objective View of Fault in Patent Infringement' (2011) 60 *American University Law Review* 1575; Jacob S Sherkow, 'Patent Infringement as Criminal Conduct' (2012) 19 *Michigan Telecommunications & Technology Law Review* 1; Charles W Adams, 'Indirect Infringement from a Tort Law Perspective' (2008) 42 *University of Richmond Law Review* 635; Lynda J Oswald, 'The Intent Element of "Inducement to Infringe" Under Patent Law: Reflections on *Grokster*' (2006) 13 *Michigan Telecommunications & Technology Law Review* 225.

<sup>253</sup> See generally, *Commil USA LLC v Cisco Systems Inc* (S Ct, No 13-896, 26 May 2015).

<sup>254</sup> See generally, *The Koursk* [1924] P 140; *Akamai Technologies Inc v Limelight Networks Inc*, 692 F 3d 1301, 1330–1 (Newman J) (Fed Cir, 2012); Dmitry Karshedt, 'Formalism and Pragmatism in the Analysis of Damages for Indirect Patent Infringement' (2013) 91 *Washington University Law Review* 911.

<sup>255</sup> The Law Reform Commission, *Annual Report 1900* (1990) 70 [7] (appendix 2, submission to the Senate Standing Committee on Legal and Constitutional Affairs: Reducing The Cost of Justice).

More broadly, the idea of clarifying rights in patents overlaps with James Bessen and Michael Meurer's argument that if patents are to operate efficiently as property rights, then the boundaries of what constitutes infringement should be demarcated as clearly as possible.<sup>256</sup> Further to this argument, the authors contend that, if patent rights are not clearly demarcated, then this uncertainty can lead to costly litigation and other transaction costs, that undermine the value of a patent, and more broadly, impair the operation of the patent system.<sup>257</sup> Indeed, it is very likely that for parties that are commercialising IT and Internet orientated communications technologies, clarity on this point of law would be much appreciated.

Related to the notion of reducing uncertainty, in a recent article by Professors Mark Janis and Timothy Holbrook, the authors argue that since many people (for example scientists and business development managers) interact with patent law but are not experts in it, where possible, patent law should be simplified so that they can understand it.<sup>258</sup> In this context, accessibility of the law relating to procured infringement has much to be improved upon. Not only is procured infringement not recorded in the *Patents Act*, but, at the moment some Australian intellectual property textbooks do not refer to it.<sup>259</sup> The codification of procured infringement will make it easier to identify, and remove the need to refer to several cases to understand the basic elements of the action. In short, codification of a form of infringement law that exists, but seldom used or acknowledged, is a paradigm example of simplifying law to enhance its operation.

It should also be acknowledged that this is not the first scholarly work to advocate for codification of procured infringement. In 1979, the then Minister for Productivity asked the Industrial Property Advisory Committee, at the time the independent government body appointed by the Australian government, to review the patent system.<sup>260</sup> Prior to the Industrial Property Advisory Committee writing their report, they sought expert advice on a variety of areas and commissioned Monash University to report on a number of issues.<sup>261</sup> This report comprehensively addressed secondary/indirect infringement across many jurisdictions.<sup>262</sup> With regards to procured infringement, the report recognised the action as emerging from the common law and concluded that it should be codified.<sup>263</sup>

<sup>256</sup> James Bessen and Michael J Meurer, *Patent Failure* (Princeton University Press, 2008) 47–52; see also, Introduction, pt II.

<sup>257</sup> *Ibid* ch 2.

<sup>258</sup> Mark D Janis and Timothy R Holbrook, 'Patent Law's Audience' (2012) 97 *Minnesota Law Review* 72, 76–89.

<sup>259</sup> For example see, Bowrey et al, *Australian Intellectual Property: Commentary Law and Practice* (Oxford University Press, 2010); Ricketson et al, *Intellectual Property: Cases Material and Commentary* (LexisNexis Butterworths, 4<sup>th</sup> ed, 2009) 815–35; cf. McKeough et al, *Intellectual Property in Australia* (LexisNexis Butterworths, 3<sup>rd</sup> ed, 2004) 395; Davison et al, *Australian Intellectual Property Law* (Cambridge University Press, 2<sup>nd</sup> ed, 2012) 569–70.

<sup>260</sup> Ann Duffy, *Report to the Industrial Property Advisory Committee* (Monash University Law School, 1983) vol 1, iii.

<sup>261</sup> *Ibid*.

<sup>262</sup> *Ibid* 209–79.

<sup>263</sup> *Ibid* 216, 277–8; See also, Ann L Monotti, 'Infringement of a Patent by Authorisation: Clear or Muddy Waters?' (2013) 24 *Australian Intellectual Property Journal* 5, 11–3.

A classic argument against codification is that the common law is more fluid and can evolve to meet changing values and practices over time.<sup>264</sup> However, the problem with this argument, in the context of procured infringement, is that such actions are infrequent in Australia and require the expense of litigation. Moreover, as outlined above, the basis for procured infringement has been part of the English common law since the 19<sup>th</sup> century,<sup>265</sup> and no significant changes to the law are being advocated for here, rather what is being sought is clarification, consistent with patent policy. Indeed, the only significant change to procured infringement since Australia's first patent legislation was enacted in 1903,<sup>266</sup> is the recognition of procured infringement by the Federal Court.

## Conclusion

The primary rationale for patent systems is that they are designed to incentivise innovation by creating exclusive property rights in inventions. If a patented invention can be effectively implemented via divided performance without authorisation from the patentee, yet not be liable for infringement, then the incentive element of patent law is undermined. The analysis in this chapter suggests that there is no defined liability pathway for divided performance in Australia, but procured infringement appears to be applicable. Pursuant to this finding, this chapter argues that the best way to resolve this lack of clear exclusivity for inventions like those in *Akamai* and *McKesson* is to codify procured infringement, clarifying exactly how the cause of action is to operate, and in particular, specifying that it is applicable to divided performance. Codification would inevitably involve detailed discussion of aspects of the law beyond those addressed in this chapter. However, in the interests of providing clear legal rights for those that use patent law, this is a desirable goal.

What is proposed here is not radical, or even freethinking. The principles emerged from case law in the 1800s, and due to the evolution of technology and business structures, have even greater relevance today.

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<sup>264</sup> See eg, Attorney-General's Department, *Should Contract Law Be Codified?* <<https://www.ag.gov.au/Consultations/Documents/ReviewofAustraliancontractlaw/Shouldcontractlawbecodified.pdf>>.

<sup>265</sup> *Innes v Short* (1898) 15 RPC 449, 451–2; *Townsend v Haworth* (1879) 48 LJ Ch 770, 770–1; *Gibson v Brand* (1842) 1 WPC 627, 631 (Tindal CJ).

<sup>266</sup> *Patents Act 1903* (Cth).

## Chapter 4

## Reluctance Realised? Emerging Problems with s 117(2)(b) of the *Patents Act 1990 (Cth)*<sup>1</sup>

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copyright or proprietary reasons.

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<sup>1</sup> This chapter has been published in, Johnathon E Liddicoat, 'Reluctance Realised? Emerging Problems with s 117(2)(b) of the *Patents Act 1990 (Cth)*' forthcoming *Monash Law Review*.

## Chapter 5

### Solutions to Problems with s 117(2)(b) of the *Patents Act 1990* (Cth)

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## Introduction

The three preceding chapters of this thesis have all focused on various infringement causes of action in Australia. Like those chapters, this chapter continues to focus on an infringement cause of action, however, this chapter changes tack. Rather than evaluating whether an emergent issue is dealt with by the patent system in a way that accurately reflects the justifications for patent law, this chapter builds directly on the problems that were outlined in chapter 4. In short, this chapter aims to solve the problems that the analysis in chapter 4 presented by considering the applicability of various legislative amendments. Relevantly, chapter 4 outlined a number of emerging problems with the operation of supply infringement under s 117(2)(b) of the *Patents Act 1990* (Cth) ('the *Patents Act*'),<sup>1</sup> which is currently affecting markets for generic drugs, at a significant cost to the Australian government and public.

The first problem described in chapter 4 is that, in certain circumstances, patentees could enforce their method claims under s 117(2)(b) to foreclose supply of products that are not patented themselves but have infringing uses, even though the same products also have substantial non-infringing uses. This is particularly important in the context of generic branded drugs, which much of the s 117(2)(b) litigation concerns (and this chapter focuses on), because this means that second medical use patents can be enforced as if they are a patent for the drug itself. The second problem described in chapter 4 is that, in the prescription and dispensation of drugs that are ultimately used to infringe second medical use patents, in some scenarios doctors and pharmacists may play roles that are sufficient for secondary infringement liability (and in which they bear a high level of responsibility for the infringing conduct of patients), but generic drug companies are the only parties being held to account. Thus, in both situations, s 117(2)(b) appears to be extending liability too far.

The benchmarks by which any possible amendments will be evaluated in this chapter are the three original rationales of the legislature in enacting supply infringement under s 117. That is, it was designed to: (1) create a 'more effective, realistic and just' enforcement system; (2) assist with international patent harmonisation efforts; and (3) improve certainty for holders and users of patented technology.<sup>2</sup> One solution to the problems detailed in chapter 4, is simply to repeal the provision. However, this is undesirable as it was originally enacted to offer patentees additional protection on inventions, in particular, new uses of known products,<sup>3</sup> which includes second medical

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<sup>1</sup> *Patents Act 1990* (Cth) s 117(2)(b).

<sup>2</sup> See Chapter 4 pt I; Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia*, (Australian Government Publishing Service, Canberra, 1984) 66–7; Statement of the Minister for Science, Government Response to the Report of the Industrial Property Advisory Committee, 'Patents, Innovation and Competition in Australia' (1986) 56 *The Australian Official Journal of Patents, Trade Marks and Designs* 47, 1477.

<sup>3</sup> Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 66–7; see also, Ann Monotti, 'Contributory Infringement of a Process Patent under the *Patents Act 1990*: Does it Exist After Rescare?' (1995) 6 *Australian Intellectual Property Journal* 217, 219–21.

uses of known drugs. The logic here is that, in the absence of a provision permitting method of use patents to be enforced against suppliers, patentees would only be able to pursue widely dispersed patients who use the drugs for infringing purposes – something that is likely to be difficult, ineffective and expensive.<sup>4</sup> Thus, the aim of this chapter can be effectively distilled down to balancing the ability of generic pharmaceutical companies to fairly supply drugs for non-infringing uses, with the ability of patentees to exclusively supply the same drugs for patented uses.

This chapter is divided into four parts. Part 1 provides a summary of the key findings from chapter 4 to provide context for the analysis that follows. Part 2 then explores potential ‘balancing’ amendments by outlining how the legal mechanisms in provisions analogous to s 117(2)(b) operate in the UK and US. This methodology is adopted because, by aiming to import foreign legal mechanisms into the operation of s 117(2)(b), the legislative rationale of harmonisation will be furthered. However, beyond the harmonisation rationale, there are additional reasons why these jurisdictions are chosen, namely: they have well litigated supply infringement legislation; are important trading partners with Australia; are common law nations; have accessible case law in English; were influential in the development of s 117;<sup>5</sup> and, present slightly different supply infringement legislation.

Part 3 evaluates whether any of the mechanisms from the US and UK provisions could provide an appropriate solution to the problems posed by s 117(2)(b) by examining the extent to which they might have altered the outcomes on liability in the problematic cases identified in chapter 4. Overall, the analyses in parts 2 and 3 are quite wide ranging. They include legal mechanisms specific to supply infringement, such as the definition of ‘staple commercial products’, as well as other traditional legal mechanisms such as the mental element that must be proved. Part 4 then extends the analysis in part 3 and assesses whether any of the mechanisms should be inserted into s 117(2)(b). This final assessment is made against the remaining rationales provided by the legislature for enacting s 117.

Admittedly, other jurisdictions could offer alternative solutions to the problems posed by s 117(2)(b), or perhaps bespoke solutions could be developed *de novo*. However, the foreign comparisons conducted here offer ample alternatives and it is suggested that by adopting a certain international approach into s 117(2)(b), a more balanced, certain, and harmonised law can be established.

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<sup>4</sup> Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 66–7; Ann Monotti, ‘Contributory Infringement of a Process Patent under the *Patents Act 1990*: Does it Exist After Rescare?’ (1995) 6 *Australian Intellectual Property Journal* 217, 219–21.

<sup>5</sup> Ann Dufty, *Report to the Industrial Property Advisory Committee*, (Monash University Law School, 1983) vol 1, 209–78; Statement of the Minister for Science, Government Response to the Report of the Industrial Property Advisory Committee, ‘*Patents, Innovation and Competition in Australia*’ (1986) 56 *The Australian Official Journal of Patents, Trade Marks and Designs* 47, 1462, 1477.

## I. Section 117(2)(b) of the *Patents Act*

This chapter analyses the wording of s 117(2)(b) in detail, it is therefore useful to reference the provision in full. It can be found in chapter 2 part II B.<sup>6</sup> As described in chapter 4, three key cases demonstrate the problems with s 117: *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* ('Otsuka');<sup>7</sup> *AstraZeneca AB v Apotex Pty Ltd* ('AstraZeneca');<sup>8</sup> and; *Warner-Lambert Co LLC v Apotex Pty Ltd* ('Lambert').<sup>9</sup> In these cases, the requirements in s 117(1), of whether a use of the supplied product was infringing, and whether the supplier was not a licensee of the relevant patent, were not contentious.<sup>10</sup> Thus, in these cases, supply infringement liability depended on proving the two remaining requirements in s 117(2)(b). That is, the product supplied was not a 'staple commercial product' and, that 'the supplier had reason to believe' that a person would put it to the infringing use alleged.<sup>11</sup> As also explained in chapter 4, as a general rule, drugs that treat a narrow range of diseases do not qualify as 'staple commercial products'.<sup>12</sup> This means that supply of prescription drugs is, as a general rule, amenable to s 117 infringement.

In the context of these cases, the most contentious requirement with regard to supply infringement liability was whether the supplier had a 'reason to believe'. In *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd*,<sup>13</sup> all the members of the Full Court of the Federal Court of Australia concluded that this requirement could be satisfied objectively,<sup>14</sup> with the test being whether 'a reasonable person in the position of [the supplier] would have reason to hold such a belief'.<sup>15</sup> Although these cases were analysed in detail in chapter 4,<sup>16</sup> it is necessary to outline key aspects of these cases that are relevant to the analyses that follow in later parts of this chapter.

<sup>6</sup> See page 72.

<sup>7</sup> *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* [2015] FCA 634 (29 June 2015).

<sup>8</sup> *AstraZeneca AB v Apotex Pty Ltd* (2014) 226 FCR 324.

<sup>9</sup> *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632. The case of *Apotex Pty Ltd v Sanofi-Aventis Aust Pty Ltd* (2013) 304 ALR 1, is not a topic of analysis in this chapter because in that case infringement was not found.

<sup>10</sup> See generally, *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632; *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* [2015] FCA 634 (29 June 2015). Whether infringement by exploitation occurred, was raised in *Apotex Pty Ltd v AstraZeneca AB* (2013) 100 IPR 285, but was dismissed (at: 409–10) and was not pursued on appeal in *AstraZeneca AB v Apotex Pty Ltd* (2014) 226 FCR 324.

<sup>11</sup> *Patents Act* (Cth) s 117(2)(b).

<sup>12</sup> See, Chapter 4 pt II A; rosuvastatin was found not be a staple commercial product in *AstraZeneca AB v Apotex Pty Ltd* (2014) 226 FCR 324, 417–9 (Besanko, Foster, Nicholas and Yates JJ). Leflunomide was found not to be a staple commercial product in *Sanofi-Aventis Australia Pty Ltd v Apotex Pty Ltd [No 3]* (2011) 196 FCR 1, 79, this was not pursued on appeal in *Apotex Pty Ltd v Sanofi-Aventis Australia Pty Ltd [No 2]* (2012) 204 FCR 494, 528. Aripiprazole was found not to be a staple commercial product in *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* [2015] FCA 634 (29 June 2015) [182]–[191]. For the purposes of an interlocutory injunction pregabalin was accepted to not be a staple commercial product in *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632, 637 (Allsop CJ, Jagot and Nicholas JJ).

<sup>13</sup> *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd* (2013) 296 ALR 50.

<sup>14</sup> *Ibid* 59 (Emmett J), 73–4 (Bennett J), 90 (Greenwood J).

<sup>15</sup> *Ibid* 59 (Emmett J); see also, *ibid*, 73–4 (Bennett J).

<sup>16</sup> See, Chapter 4 pt II A.



In *Lambert*, the patentees controlled rights to the use of pregabalin to treat pain.<sup>17</sup> At the time there were two medically approved listings for pregabalin, one for pain and another for seizures, with the latter being non-infringing.<sup>18</sup> Since the seizures indication was non-infringing, a generic pharmaceutical company obtained approval of pregabalin for this purpose and went on to launch the product.<sup>19</sup> Despite the fact the approval was limited to the non-infringing use, the patentees alleged infringement under s 117(2)(b) on the grounds that generic pregabalin would be used 'off-label'<sup>20</sup> for the patented use of treating pain.<sup>21</sup> In an interlocutory injunction appeal before the Full Court of the Federal Court of Australia, the unanimous Court found a prima facie case was made out because evidence from a pharmacist suggested suppliers would have a 'reason to believe' that doctors would prescribe pregabalin for pain and pharmacists would substitute a generic version of the drug.<sup>22</sup>

In *AstraZeneca*, the drug rosuvastatin could be used for various non-infringing purposes related to cardiovascular disease,<sup>23</sup> but the primary s 117(2)(b) argument was that that doctors would prescribe, or pharmacists would dispense, dosages of generic-labelled rosuvastatin for the infringing use of lowering cholesterol. An important part of this argument was that to use the generic version for the off-label infringing purpose, the pills had to be split.<sup>24</sup> On this point, evidence was led of pill splitting using a cheap, handheld 'pill-splitter' that was commonly available in pharmacies.<sup>25</sup> Although the Full Federal Court found the relevant patents were invalid,<sup>26</sup> the Court reasoned that, if they were valid, supply infringement would be found because there was sufficient evidence of doctors prescribing generic-labelled rosuvastatin in circumstances where it would be split for a supplier to be aware that it would be used for an infringing purpose.<sup>27</sup>

In *Otsuka*, the drug aripiprazole could be used for treating schizophrenia at all stages of the disease,<sup>28</sup> and a generic company supplied it for this purpose, but the patentee claimed use of the drug to treat a certain sub-type of schizophrenia under certain conditions. These conditions related to patients' symptoms and responses to other drugs.<sup>29</sup> The patentee's s 117(2)(b) argument was that a generic

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<sup>17</sup> *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632, 633.

<sup>18</sup> *Ibid* 634.

<sup>19</sup> *Ibid* 635.

<sup>20</sup> For a discussion of the term 'off-label', see Chapter 4 pt II A.

<sup>21</sup> *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632, 637.

<sup>22</sup> *Ibid* 651–2.

<sup>23</sup> *AstraZeneca AB v Apotex Pty Ltd* (2014) 226 FCR 324, 418 (Besanko, Foster, Nicholas and Yates JJ), 421 (Jessup J agreed with the majority on this point).

<sup>24</sup> *Ibid* 417–20.

<sup>25</sup> *Ibid*.

<sup>26</sup> *Ibid* 378, 402, 403–4.

<sup>27</sup> *Ibid* 417–20.

<sup>28</sup> *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd* (2012) 291 ALR 763, 768–9.

<sup>29</sup> *Ibid* 774.

version of aripiprazole would be dispensed in situations in which it was infringing.<sup>30</sup> Ultimately, the patents in this case were found to be invalid. However, based on instances of medical practitioners prescribing aripiprazole in circumstances that would be infringing if a generic version of the drug was dispensed, Yates J found that a ‘reason to believe’ was established.<sup>31</sup>

The descriptions of these cases outline how the ‘reason to believe’ aspect of s 117(2)(b) can be satisfied. They also illustrate the ‘foreclosure’ issue associated with s 117(2)(b) because, if the second medical use patents in all these cases were valid, infringement would have been found. Accordingly, orders would likely have been made prohibiting supply of the generic drugs for any purpose<sup>32</sup> — as was ordered in *Lambert*.<sup>33</sup> In the circumstances of *AstraZeneca* and *Otsuka*, this is particularly problematic because evidence suggested that the non-infringing uses of the drugs were more common than the infringing ones.<sup>34</sup>

## II. Legal Mechanisms in Equivalent UK and US Provisions

The UK equivalent to s 117(2)(b) is ss 60(2)–(3) of the *Patents Act 1977* (UK), and the US equivalent is 35 USC § 271(c). For ease of reference, both of these provisions are extracted in **Table 3** (below). This part outlines how the legal mechanisms in these provisions operate, thereby setting the groundwork for parts 3 and 4 to evaluate whether any the mechanisms should be incorporated in s 117(2)(b).

*Table 3* Equivalent statutory supply infringement provisions in the UK and US.

Country	Equivalent Supply Infringement Legislation
UK	<p>(2) Subject to the following provisions of this section, a person (other than the proprietor of the patent) also infringes a patent for an invention if, while the patent is in force and without the consent of the proprietor, he supplies or offers to supply in the United Kingdom a person other than a licensee or other person entitled to work the invention with any of the means, relating to an essential element of the invention, for putting the invention into effect when he knows, or it is obvious to a reasonable person in the circumstances, that those means are suitable for putting, and are intended to put, the invention into effect in the United Kingdom.</p> <p>(3) Subsection (2) above shall not apply to the supply or offer of a staple commercial product unless the supply or the offer is made for the purpose of inducing the person supplied or, as the case may be, the person to whom the offer is made to do an act which constitutes an infringement of the patent by virtue of subsection (1) above.</p>
US	(c) Whoever offers to sell or sells within the United States or imports into the United States

<sup>30</sup> *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* [2015] FCA 634 (29 June 2015) [180]. An element of this case distinguishing it from the other two is that the infringing use of the generic drug was not actually off-label because it was approved for use in all stages of treating schizophrenia.

<sup>31</sup> *Ibid* [244]–[245].

<sup>32</sup> See comments regarding courts’ discretion to narrow injunctions in Chapter 4 pt II B.

<sup>33</sup> *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632, 654–5.

<sup>34</sup> *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* [2015] FCA 634 (29 June 2015) [200]–[249]; *Apotex Pty Ltd v AstraZeneca AB* (2013) 100 IPR 285, 408–9.

	a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.
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### A. UK

Under ss 60(2)–(3) of the *Patents Act 1977* (UK)<sup>35</sup>, there are five elements that must be satisfied to prove supply infringement. These have been summarised as: the knowledge requirement; ‘staple commercial product’; ‘essential element’; ‘means suitable for putting the invention into effect’; and a person other than a licensee.<sup>36</sup> The knowledge requirement, ‘essential element,’ and ‘means suitable for putting the invention into effect’ have been considered by appellate courts. However, the remaining two elements were effectively considered for the first time in Arnold J’s first instance judgment in *Nestec SA v Dualit Ltd* (*‘Nestec’*).<sup>37</sup>

*Grimme Landmaschinenfabrik BmbH v Scott* (*‘Grimme’*)<sup>38</sup> is the leading case on the UK knowledge requirement. The knowledge requirement in s 60(2) is stipulated in the passage, ‘he knows, or it is obvious to a reasonable person in the circumstances, that those means are suitable for putting, and are intended to put, the invention into effect...’. In *Grimme*, the joint judgement of Etherton and Jacob LJ was agreed to in whole by Sir David Keene.<sup>39</sup> Etherton and Jacob LJ held that the knowledge requirement has two components. First, that the supplier must know, or it must be obvious to a reasonable person in the position of the supplier, that the product supplied is probably suitable for the infringing use alleged. Second, that the supplier must know, or it must be obvious to a reasonable person in the position of the supplier, that some ultimate users of the product will probably intend to put it to the infringing use.<sup>40</sup> The patent in *Grimme* concerned a machine for separating potatoes from soil and haulm when they were extracted from the ground.<sup>41</sup> The supplier in *Grimme* advised how to use a machine it sold for the infringing purpose and also sold attachments to help achieve this purpose.<sup>42</sup> Accordingly, the Court found that the mental element was satisfied because the supplier had subjective knowledge that the machine was suitable for the infringing use, and that persons supplied would intend to put it to this use because they were advised of it.<sup>43</sup>

<sup>35</sup> *Patents Act 1977* (UK) c 37, ss 60(2)–(3).

<sup>36</sup> See, *Nestec SA v Dualit Ltd* [2013] EWHC 923 (Pat) [153]–[205].

<sup>37</sup> *Nestec SA v Dualit Ltd* [2013] EWHC 923 (Pat).

<sup>38</sup> *Grimme Landmaschinenfabrik GmbH & Co KG v Scott* [2011] FSR 7.

<sup>39</sup> *Ibid* [141].

<sup>40</sup> *Ibid* [112], [116]–[117].

<sup>41</sup> *Ibid* [H5].

<sup>42</sup> *Ibid* [69]–[70].

<sup>43</sup> *Ibid* [127]–[132].

In *Nestec*, Arnold J summarised the relevant patent as relating to a coffee ‘extraction system’ which was embodied in the claimant’s coffee machine.<sup>44</sup> The claimant had sold variations of its coffee machine since 1986 and all versions of the machine operated by extracting coffee from capsules, which the claimant also supplied.<sup>45</sup> The capsules had been patent protected but the relevant patent expired in May 2011.<sup>46</sup> The defendant in *Nestec* initially only produced coffee capsules that were designed to be used in the claimant’s machine,<sup>47</sup> but later produced adaptors for capsules to enable them to be used in other capsule-based coffee machines.<sup>48</sup> The claimant alleged that the use of the defendant’s coffee capsules in the machine it sold infringed its rights in the patented extraction system, and therefore argued that the defendant was liable for supplying the capsules under s 60(2).<sup>49</sup> Ultimately, Arnold J found the patent to be invalid for a number of reasons, including lack of novelty,<sup>50</sup> but considered infringement, had the patent been valid.<sup>51</sup>

Through the operation of s 60(3), supply infringement in UK patent law limits the types of products amenable to the suit to ‘non-staple commercial products’.<sup>52</sup> In *Nestec*, Arnold J had to consider whether the coffee capsules satisfied this criterion.<sup>53</sup> Prior to *Nestec*, the requirement had not been authoritatively considered in the UK.<sup>54</sup> Thus, Arnold J looked internationally for assistance on the meaning of the phrase. Ultimately, his Honour adopted Crennan J’s interpretation in the Australian High Court case, *Northern Territory v Collins*.<sup>55</sup> As outlined in chapter 2,<sup>56</sup> Crennan J in this case stated, the ‘relevant inquiry is into whether the supply of the product is commercial and whether the product has various uses’.<sup>57</sup> Applying this interpretation to the coffee capsules in *Nestec*, Arnold J found that although the adaptors for the capsules allowed them to be used in other capsule-based machines,<sup>58</sup> they had ‘no other use other than with a limited range of coffee machines’.<sup>59</sup> Accordingly, his Honour found that the capsules were non-staple commercial products, and therefore supply of them was amenable to supply infringement.<sup>60</sup>

<sup>44</sup> *Nestec SA v Dualit Ltd* [2013] EWHC 923 (Pat) [69].

<sup>45</sup> *Ibid* [17]–[24].

<sup>46</sup> *Ibid* [162].

<sup>47</sup> *Ibid* [182].

<sup>48</sup> *Ibid*.

<sup>49</sup> *Ibid* [153].

<sup>50</sup> *Ibid* [120]; for s summary, see, [206].

<sup>51</sup> *Ibid* [206].

<sup>52</sup> As per s 60(2) this element is not required if a supplier ‘induces’ infringement. However, as discussed in part 1, this chapter is not concerned with supply infringement that occurs via inducement. Accordingly, the ‘staple commercial products’ component of this action will be treated as if it is strictly required.

<sup>53</sup> *Nestec SA v Dualit Ltd* [2013] EWHC 923 (Pat) [177]–[82].

<sup>54</sup> *Ibid*; see also, *Pavel v Sony (UK) Ltd* (Unreported, Patents County Court, Ford J, 13 January 1993) [6.3]–[6.6].

<sup>55</sup> *Nestec SA v Dualit Ltd* [2013] EWHC 923 (Pat) [182]; *Northern Territory v Collins* (2008) 235 CLR 619, 630.

<sup>56</sup> See, Chapter 2 pt II B.

<sup>57</sup> *Northern Territory v Collins* (2008) 235 CLR 619, 630.

<sup>58</sup> *Nestec SA v Dualit Ltd* [2013] EWHC 923 (Pat) [182].

<sup>59</sup> *Ibid*.

<sup>60</sup> *Ibid*.

With regard to the requirement of ‘essential element’, this arises from the passage in s 60(2) that mandates that a successful supply infringement action depends on whether the supplied product relates to an ‘essential element of the invention’. Prior to *Nestec*, no English authority had comprehensively interpreted the passage,<sup>61</sup> and thus, Arnold J again referred to international interpretations.<sup>62</sup> The German interpretation, which his Honour adopted,<sup>63</sup> was that any means which contributed to ‘implementing the technical teaching of the invention’ constituted an ‘essential element’,<sup>64</sup> even if the means were known in the prior art.<sup>65</sup> Arnold J further clarified this requirement, stating that a means would only be considered a non-essential element if it was ‘completely subordinate’ to the technical teaching of the invention.<sup>66</sup> In applying this requirement, Arnold J said that in the coffee extraction system, the ‘invention takes the capsule as a given, and claim 1 only requires the capsule to have a guide edge in the form of a flange’.<sup>67</sup> However, his Honour also found that, ‘the flange of the capsule plays a significant role in the way in which the claimed invention works.’<sup>68</sup> By this his Honour was referring to the way the system used the flange to move the capsule into place. His Honour therefore concluded that the capsule contributed to the implementation of the technical teaching in the patent and was not of completely subordinate importance.<sup>69</sup> In *Grimme*, although the Court did not comprehensively interpret the ‘essential element’ requirement, it did find that the required ‘essential element’ could be satisfied when a supplied product had to be adapted by a receiver before it could be put to an infringing use.<sup>70</sup>

In the UK Supreme Court case, *Schütz (UK) Ltd v Werit UK Ltd* (*‘Schütz’*),<sup>71</sup> the Court addressed the requirement, ‘means suitable for putting the invention into effect’, which is actually shorthand for the passage from s 60(2), ‘he supplies...any of the means... suitable for putting ... the invention into effect’. Writing for the unanimous Court, Lord Neuberger held that this passage required that use of the supplied product resulted in direct infringement.<sup>72</sup> The claimant in *Schütz* was the exclusive licensee of the patent titled, ‘[p]allet container for the transporting and storing of liquids’, the containers themselves being more commonly known as ‘intermediate bulk containers’.<sup>73</sup> Broadly speaking, the invention was for a metal cage that plastic bottles fitted within, and which rests on a

<sup>61</sup> Ibid [168]; see also, *Grimme Landmaschinenfabrik GmbH & Co KG v Scott* [2011] FSR 7 [99]–[104]; *Actavis UK Ltd v Eli Lilly & Co* [2015] EWCA Civ 555 [81]–[92].

<sup>62</sup> Ibid [168]–[75].

<sup>63</sup> Ibid [175].

<sup>64</sup> Ibid [170].

<sup>65</sup> Ibid [172].

<sup>66</sup> Ibid.

<sup>67</sup> Ibid [176].

<sup>68</sup> Ibid [176].

<sup>69</sup> Ibid.

<sup>70</sup> *Grimme Landmaschinenfabrik GmbH & Co KG v Scott* [2011] FSR 7 [99]–[104]; see also, *Actavis UK Ltd v Eli Lilly & Co* [2015] EWCA Civ 555, [81]–[92].

<sup>71</sup> *Schütz (UK) Ltd v Werit UK Ltd* [2013] 2 ALL ER 177.

<sup>72</sup> Ibid 181, 184; see also, *Nestec SA v Dualit Ltd* [2013] EWHC 923 (Pat) [183].

<sup>73</sup> *Schütz (UK) Ltd v Werit UK Ltd* [2013] 2 ALL ER 177, 177.

transport pallet.<sup>74</sup> The issue in this case was that the appellant supplied replacement bottles for the intermediate bulk container frames when the bottles wore out, and it was argued that replacing the bottles in the frame constituted infringement, and therefore the appellant was liable for supplying them.<sup>75</sup> Since direct infringement was required, the Court had to determine whether putting new bottles in the intermediate bulk container frames actually constituted ‘making’ the invention.<sup>76</sup>

In determining whether the invention was ‘made’, Lord Neuberger outlined ten considerations.<sup>77</sup> It is not necessary to touch upon all the considerations as different elements may influence different cases.<sup>78</sup> However, Lord Neuberger did state that it is ‘legitimate and helpful’ to question whether the bottle was a ‘subsidiary part’ of the invention.<sup>79</sup> In applying this question, his Honour acknowledged that the bottle was an essential and large part of the patented product, but in the context of the whole invention, found it to be a subsidiary part.<sup>80</sup> Neuberger J arrived at this conclusion by focusing on two elements. First, the metal cage would exceed the life of the bottle and a purchaser would expect to be able to replace the bottles.<sup>81</sup> And second, the ‘bottle did not include any aspect of the inventive concept of the patent’.<sup>82</sup>

In *Nestec*, Arnold J applied Lord Neuberger’s reasoning when a question was raised about whether use of the capsules in the coffee extraction system constituted ‘making’ it.<sup>83</sup> His Honour found that the capsules were a subsidiary part of the system for a number of reasons. Primarily, the capsules: had a much shorter life than the machine; are regularly used and discarded; have independent economic existence from the machine; do not embody the inventive concept; were required for use of the machine; and, there was no notice that the user must use any specific capsules.<sup>84</sup> Accordingly, Arnold J held use of the capsules in the machine did not result in the coffee extraction system being ‘made’ and therefore no direct infringement occurred.<sup>85</sup>

The fifth element of supply infringement under s 60(2) of the *Patents Act 1977* (UK), that the purchaser is ‘a person other than a licensee’, operates to limit supply infringement to circumstances in which a person supplied does not have a licence. In *Nestec*, Arnold J held that this passage also included implied licences.<sup>86</sup> In outlining how implied licences operate in patent infringement law,

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<sup>74</sup> Ibid.

<sup>75</sup> Ibid 181–4.

<sup>76</sup> Ibid 177–8.

<sup>77</sup> Ibid 186–7.

<sup>78</sup> Ibid 188 (citations omitted).

<sup>79</sup> Ibid 193.

<sup>80</sup> Ibid 194.

<sup>81</sup> Ibid 193–4.

<sup>82</sup> Ibid 194.

<sup>83</sup> *Nestec SA v Dualit Ltd* [2013] EWHC 923 (Pat) [183].

<sup>84</sup> Ibid [199]–[205].

<sup>85</sup> Ibid [205].

<sup>86</sup> Ibid [158].

Arnold J extracted a quote of Lord Hoffman's in the House of Lords case, *United Wire Ltd v Screen Repair Services (Scotland Ltd)*,<sup>87</sup> where his Honour stated:

The concept of an implied licence to do various acts in relation to a patented product is well established in the authorities. Its proper function is to explain why, notwithstanding the apparent breadth of the patentee's rights, a person who has acquired the product with the consent of the patentee may use or dispose of it in any way he pleases.<sup>88</sup>

Arnold J applied this reasoning to the facts in *Nestec* and stated:

In order to use the machine for its intended purpose, the purchaser must insert capsules into the machine. It follows that the purchaser must be impliedly licensed to obtain and use capsules with the machine. Otherwise, it would be useless. In the absence of any restriction upon the purchaser preventing him from obtaining capsules from third parties, the purchaser is entitled to do so.<sup>89</sup>

Put in a slightly different way, Arnold J held that if an invention is 'made' when it is used in its intended way, and requires consumables to do this, then without a restriction on what consumables can be used, there must be an implied licence for purchasers to use any consumables they please.<sup>90</sup>

## B. US

Under 35 USC § 271(c), it is generally considered that there are three elements that must be satisfied to succeed in a supply infringement action.<sup>91</sup> Using a shorthand notation, these three elements are: the knowledge requirement; 'staple articles'; and 'material part'. However, before elaborating on these mechanisms, it is necessary to briefly address a related, preliminary aspect of § 271(c). The provision refers to articles that are 'sold', not supplied. Ostensibly, this wording limits the methods by which liability may arise under the provision. However, this limitation will not be addressed further because all the cases addressed in this chapter involve products that are sold.

In addition to the three mechanisms already outlined, there is a fourth consideration — a 'carve out' — that must be discussed. Although it is not part of supply infringement under § 271(c), it is central to this chapter because a recent Australian government sponsored review of pharmaceutical patents recommended implementing a US-style carve out into s 117.<sup>92</sup> This fourth mechanism will be addressed at the end of this section.<sup>93</sup>

<sup>87</sup> *United Wire v Screen Repair Services (Scotland Ltd)* [2000] 4 ALL ER 353.

<sup>88</sup> *Ibid* 357.

<sup>89</sup> *Nestec SA v Dualit Ltd* [2013] EWHC 923 (Pat) [164].

<sup>90</sup> *Ibid* [165]–[166].

<sup>91</sup> Donald S Chisum, LexisNexis, *Chisum on Patents*, vol 5 (at Release 130–11/2011) § 17.03.

<sup>92</sup> Australian Government, *Pharmaceutical Patents Review* (Canberra, May 2013) 138–40.

<sup>93</sup> In the analysis of UK law above, implied licences and a detailed examination of 'make' (which was addressed under the requirement 'means suitable for putting the invention into effect') were canvassed. In light of these, it is acknowledged that US law has similar mechanisms, however, despite the broad relevance of these US mechanisms to this chapter, they will not be evaluated further. The reason for this is that, as explored below, Australian law is likely to operate in a similar way to the

With regard to the knowledge element, the US Supreme Court has addressed it a number of times.<sup>94</sup> Relevantly, the Court has held that the legislative passage, ‘knowing the same to be especially made or especially adapted for use in an infringement of such patent’, requires that a supplier must know, or be wilfully blind, to the infringing use that a product can be put and that the product will actually be put to that use.<sup>95</sup> The operation of this mechanism raises the possibility that supply of certain articles may not incur liability under § 271(c) for two reasons: either a supplier is unaware that a product will be put to a certain use; or, that they are unaware that a particular use is infringing. However, either reason cannot exclude liability permanently because once infringing actions are brought to the supplier’s attention, such as when an alleged infringer is served legal documents in a civil action, a supplier is made subjectively aware of the infringing uses.<sup>96</sup>

The ‘staple articles’ requirement is drawn from the passage in § 271(c), ‘not a staple article or commodity of commerce suitable for substantial noninfringing use.’ This mechanism limits supply infringement in the US in much the same way as ‘staple commercial products’ does in the UK and Australia, although it has a different field of operation.<sup>97</sup> One of the draftspersons of § 271, Giles Rich, described staple articles and commodities suitable for substantial non-infringing use as ‘first cousins’.<sup>98</sup> Indeed, modern US authorities treat staple articles as those with substantial non-infringing uses,<sup>99</sup> a type of circular definition. Nonetheless, clarifying this requirement, the United States Court of Appeals for the Federal Circuit in *Vita-Mix Corp v Basic Holding Inc*,<sup>100</sup> stated ‘that non-infringing uses are substantial when they are not unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental.’<sup>101</sup> In this case, the patentee controlled rights to an invention that prevented the formation of air pockets around the blades of household food blenders.<sup>102</sup> The

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UK mechanisms, and, s 117(2)(b) liability in the problematic cases is quite unlikely to be affected by such consideration. In this way, then, this chapter uses the UK mechanisms to show that similar law is likely to exist in Australia, but since little turns on it, there is little to be gained by also analysing the US equivalents. For relevant US law on implied licences see, eg, Donald S Chisum, LexisNexis, *Chisum on Patents*, vol 5 (at Release 141-12/2013) § 16.03[2]. For US law on the repair-reconstruction dichotomy see, eg, Donald S Chisum, LexisNexis, *Chisum on Patents* (at Release 141-12/2013) § 16.03[3]. See also, Christina M Sperry, ‘Building A Mystery: Repair, Reconstruction, Implied Licenses, and *Hewlett-Packard Co v Repeat-O-Type Stencil Manufacturing Corp*’ (1999) 5 *Boston University Journal of Science & Technology Law* 9.

<sup>94</sup> See, eg, *Global-Tech Appliances Inc v SEB SA*, 131 S Ct 2060 (2011); *Aro Manufacturing Co v Convertible Top Replacement Co*, 365 US 336 (1961); *Metro-Goldwyn-Mayer Studios Inc v Gorkster Ltd*, 545 US 913, 933–4 (2005) (this is a copyright case, but as stated in the decision, the principle is the same).

<sup>95</sup> *Global-Tech Appliances Inc v SEB SA*, 131 S Ct 2060, 2067–71 (2011). This case is actually decided on the 35 USC 271(b), not 271(c). However, as the Supreme Court majority states in the opinion, 271(b) and 271(c) have the same mental element requirement in this respect: at 2068; see also, *Aro Manufacturing Co v Convertible Top Replacement Co*, 365 US 336, 488 (1961).

<sup>96</sup> *Fujitsu Ltd v Netgear Inc*, 620 F 3d 1321, 1330 (Fed Cir, 2010).

<sup>97</sup> The definition of ‘staple articles’ was briefly addressed in Chapter 4 pt II B but the description here adds more detail to its operation.

<sup>98</sup> Giles S Rich, ‘Infringement Under Section 271 of the Patent Act of 1952’ (1953) 35 *Journal of the Patent Office Society* 476, 495.

<sup>99</sup> R Carl Moy, Thomson Reuters, *Moy’s Walker on Patents* § 15.23, 15–141; *Rohm and Hass Co v Dawson Chemical Co*, 599 F 2d 685, 687; *Sony Corporation of America v University City Studios Inc*, 464 US 417, 442 (1984).

<sup>100</sup> *Vita-Mix Corp v Basic Holding Inc*, 581 F 3d 1317, 1327 (Fed Cir, 2009).

<sup>101</sup> *Ibid* 1327.

<sup>102</sup> *Ibid* 1321.



Court found that the defendant's supplied devices were capable of non-infringing uses,<sup>103</sup> but said that whether a product was a 'staple article' or not turned on the substantiality of those uses.<sup>104</sup> The Court looked at the defining features of the defendant's blender and its designed use, and, since it found these to be directed towards non-infringing uses, reasoned that they were substantial.<sup>105</sup>

In reference to the requirement, a 'material part of the invention', the Supreme Court has only said that it does not require that the product supplied be an 'essential element', or refer to the 'gist' or 'heart' of the invention.<sup>106</sup> However, the Federal Circuit has held that it does require that the product supplied is described in the patent claims. In *Fujitsu Ltd v Netgear Inc*,<sup>107</sup> the patentee controlled rights to a wireless communication method of breaking electronic messages down into fragments and transmitting them.<sup>108</sup> The broader patent specification did mention a 'data receiver' that would defragment messages — that is, put the messages back together so they could be read — but the claims did not.<sup>109</sup> The defendant supplied a software product that, as part of its operation, defragmented data, but did not fragment it.<sup>110</sup> Pursuant to § 271(c), the patentee alleged that supply of the software would result in infringement of their patent.<sup>111</sup> The Federal Circuit did find that use of the defendant's defragmenter would mean the patentee's fragmenting invention was used, but because the claims were only directed to fragmenting data and the supplied software did not do this, the Court found a material part of the invention was not supplied by the defendant.<sup>112</sup>

Moving on to the fourth mechanism, the carve out, further background knowledge on infringement provisions in the US is required to understand how it operates. In addition to patent infringement in the US being found under §§ 271(a)–(c), it can also arise under § 271(e)(2). This provision deems that an application for government mediated medical approval of a drug, when the drug, or a specific use of the drug, is protected by a patent, constitutes infringement.<sup>113</sup> The US case of *AstraZeneca Pharmaceuticals LP v Apotex Corp*<sup>114</sup> is homologous to the Australian case of *AstraZeneca*, with supply of rosuvastatin as the central issue. In the US case, a generic pharmaceutical company applied to register rosuvastatin for non-infringing uses, and their labelling for the drug reflected this.<sup>115</sup> Despite this, a patentee who controlled rights to uses of the drug in a second medical use patent

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<sup>103</sup> Ibid 1327.

<sup>104</sup> Ibid.

<sup>105</sup> Ibid 1328.

<sup>106</sup> *Aro Manufacturing Co v Convertible Top Replacement Co*, 365 US 336, 344–5 (1961).

<sup>107</sup> *Fujitsu Ltd v Netgear Inc*, 620 F 3d 1321 (Fed Cir, 2010).

<sup>108</sup> Ibid 1326.

<sup>109</sup> Ibid 1331.

<sup>110</sup> Ibid.

<sup>111</sup> Ibid.

<sup>112</sup> Ibid.

<sup>113</sup> 35 USC 271(e)(2); a similar carve out also exists in Europe, see, *Warner-Lambert Company LLC v Actavis Group Pte EHF* [2015] EWHC 72 (Pat) (21 January 2015) [17] (Arnold J).

<sup>114</sup> *AstraZeneca Pharmaceuticals LP v Apotex Corp*, 669 F 3d 1370 (Fed Cir, 2012).

<sup>115</sup> Ibid 1374.

alleged that the generic pharmaceutical company would infringe § 271(e)(2) 'because even if a generic drug is formally approved only for unpatented uses, pharmacists and doctors will nonetheless substitute the generic for all indications once it becomes available'.<sup>116</sup> The unanimous Federal Circuit found the argument 'unpersuasive' for two reasons. First, statements required for government approval under 21 USC § 355(j) and labelling requirements, which the defendant complied with,<sup>117</sup> are designed to 'carve out patented indications' that are non-infringing.<sup>118</sup> Second, if the patent holder's argument were to succeed it:

would allow a pioneer drug manufacturer to maintain de facto indefinite exclusivity over a pharmaceutical compound by obtaining serial patents for approved methods of using the compound and then wielding § 271(e)(2) as a sword against any competitor's ... seeking approval to market an off-patent drug for an approved use not covered by the patent. Generic manufacturers would effectively be barred altogether from entering the market.'<sup>119</sup>

The outcome of *AstraZeneca Pharmaceuticals LP v Apotex Corp* demonstrates that if approval of a generic-labelled drug is sought for only non-infringing uses, and its associated application and labelling reflects this, then 21 USC 355(j) operates to exempt generic pharmaceutical companies from liability under § 271(e)(2).

This part has now examined a variety of mechanisms from the US and UK equivalents to s 117(2)(b). For convenience these mechanisms are recorded in **Table 4**.

*Table 4* Legislative mechanisms from the UK and US equivalents to s 117(2)(b)

US Legal Mechanism	UK Legal Mechanism
Subjective mental element	Objective and subjective mental element
Staple article	Staple commercial product
Essential element	Implied licences
Carve out	Means suitable for putting the invention into effect
	Material part

The next part of this chapter considers whether any of the legal mechanisms examined in this part, if present in s 117(2)(b) when *AstraZeneca*, *Otsuka*, or *Lambert* were decided, might have altered the findings of supply infringement liability in those cases.

<sup>116</sup> Ibid 1380.

<sup>117</sup> Ibid.

<sup>118</sup> Ibid.

<sup>119</sup> Ibid (citation excluded).

### III. Analysis of Whether Any of the Foreign Legal Mechanisms Alter Liability

For convenience, various mechanisms identified in part 2 are analysed together in this part due to the similarity in content. For example, the UK mental element and US mental element are analysed under the same heading because they have similar themes. At the end of this part, **Table 5** summarises the outcomes of this assessment.

#### A. Mental Element

As discussed above, the UK mental element has two components. First, the supplier must know, or it must be obvious to a reasonable person in the position of the supplier, that the product supplied is probably suitable for the infringing use alleged. Second, that the supplier must know, or it must be obvious to a reasonable person in the position of the supplier, that some ultimate users of the product will probably intend to put it to the infringing use alleged. Although, these elements can be satisfied both subjectively and objectively, since there was little evidence in the Australian cases of any subjective knowledge, and, as argued below, the objective arm of this requirement is likely to be satisfied, the analysis here will only consider the objective approach.

In *AstraZeneca* the evidence of the infringing use included widespread use of pill-splitters and doctors writing prescriptions for patients to split generic-labelled rosuvastatin pills.<sup>120</sup> In *Otsuka* the evidence of the infringing use included doctors prescribing the drug for such purposes.<sup>121</sup> Likewise, in *Lambert* a pharmacist gave evidence indicating that generic-labelled pregabalin would be dispensed for the infringing purpose of treating pain.<sup>122</sup> Since these facts were sufficient for the Australian Courts to find that the suppliers ‘had reason to believe’ that the drugs would be put to the infringing uses alleged, it makes sense that these same facts would be sufficient to make it ‘obvious’ to suppliers that they are probably suitable for the infringing uses.<sup>123</sup> On the second component of this requirement, based on the same facts, it would also be ‘obvious’ that a patient would probably intend to put the drug to the infringing use because that is why they would have obtained them. This means that, although the UK mental element differs from the Australian mental element is s 117(2)(b), it is difficult to see how the UK test, if it existed in s 117(2)(b), would alter the findings on supply infringement liability in *AstraZeneca*, *Otsuka*, and *Lambert*.

With regard to the US mental element. As outlined above, it requires evidence of subjective knowledge and has two components as well: a supply infringer must know (or be wilfully blind) to the specific actions that are to be performed; and they must know (or be wilfully blind) to the fact that those actions are infringing. The mental elements of supply infringement law in various

<sup>120</sup> *AstraZeneca AB v Apotex Pty Ltd* (2014) 226 FCR 324, 419–20.

<sup>121</sup> *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* [2015] FCA 634 (29 June 2015) [246].

<sup>122</sup> *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632, 640–2.

<sup>123</sup> See also, *KCI Licensing Inc v Smith & Nephew Plc* [2011] FSR 8 [53]–[55].

countries have been subject to comparative commentary by David Nilsson and Timo Minssen,<sup>124</sup> where the authors compare the mental elements in the US, UK, Germany, Sweden, Denmark and Norway.<sup>125</sup> As Nilsson and Minssen point out, the fact the US requirement can only be satisfied subjectively (including being wilfully blind) is unique to that jurisdiction.<sup>126</sup> Thus, the first point that can be drawn from this analysis is that if Australia were to adopt a US style mental element, broad harmonisation with other countries is unlikely to occur.

Focussing on the question of whether a US mental element would alter liability in *AstraZeneca*, *Otsuka*, or *Lambert*, ostensibly, if a supplier is not aware of a specific use of one of their products, or that a specific use is infringing, then they cannot be held liable under this test. However, a key aspect of US law is that once allegations of infringement are served on a supplier, they are subjectively made aware of both elements.<sup>127</sup> This means that, assuming the other aspects of the suit are satisfied, although infringement might not be found before service, it will be found after it (supposing the infringing conduct is continued once service is effected). In *AstraZeneca*, *Otsuka*, and *Lambert*, the conduct complained of was either occurring at the time of the hearing, or the generic companies were planning to do it.<sup>128</sup> This means that if the US mental requirement existed in s 117(2)(b), it would not have altered whether infringement was ultimately found, because service would mean that the US mental element would be satisfied.

Despite the finding that a US subjective mental element would not alter an ultimate finding of infringement in the Australian cases, there is an argument that it could still reduce financial remedies. The argument here is that, since infringement cannot be found when the knowledge element is not satisfied, then, in the absence of any other specific information relating to the product, liability can only be found after service is effected. In such circumstances, this would mean a supplier would not be liable for infringement prior to service. However, in the circumstances of supplying generic branded drugs, due to the wilful blindness aspect of the mechanism, it is quite probable that the subjective mental requirement would always be satisfied prior to service.

The majority decision in the Supreme Court case of *Global-Tech Appliances Inc v SEB SA*<sup>129</sup> is instructive on the dimensions of wilful blindness in US indirect infringement law. In this case, it was held that wilful blindness can be found when: (1) the defendant subjectively believes that there is a

<sup>124</sup> David Nilsson and Timo Minssen, 'What Intent, Whose Intent, and to What Extent? The Knowledge Requirement in Indirect Patent Infringement' (2012) 7(6) *Journal of Intellectual Property Law & Practice* 437.

<sup>125</sup> Ibid.

<sup>126</sup> Ibid 447.

<sup>127</sup> *Fujitsu Ltd v Netgear Inc*, 620 F 3d 1321, 1330 (Fed Cir, 2010).

<sup>128</sup> See, *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632,635; *AstraZeneca AB v Apotex Pty Ltd* (2014) 226 FCR 324, 417–20; *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* [2015] FCA 634 (29 June 2015) [180], [244]–[245].

<sup>129</sup> *Global-Tech Appliances Inc v SEB SA*, 131 S Ct 2060 (2011). This case was actually decided under 35 USC 271(b), not 271(c). However, as the Supreme Court majority states in their judgment, 271(b) and 271(c) have the same knowledge requirements: at 2068.

high probability that a certain fact exists; and (2) the defendant took deliberate actions to avoid learning of the fact.<sup>130</sup> When the majority in *Global-Tech Appliances Inc v SEB SA* applied this reasoning to the facts in the case, they found that the defendant was wilfully blind to inducing other parties to infringe a patent for a deep fryer.<sup>131</sup> There were three aspects of the case that led to this conclusion. First, the patentee's fryer was an innovation in the US market and the defendant undertook significant research surrounding it.<sup>132</sup> Second, the defendant deliberately copied the patentee's product, but the copying process was undertaken on an overseas version of the fryer which, unlike the US version, did not bear the US patent markings.<sup>133</sup> Third, when the defendant instructed a patent attorney to check that their new fryer was not infringing any patents, they did not inform the patent attorney that it was copied from the patentees market product.<sup>134</sup>

To understand how the majority's reasoning from *Global-Tech Appliances Inc v SEB SA* applies to a generalised situation of supplying generic branded drugs, additional background pharmaceutical industry related facts need to be outlined. It is quite well established that the pharmaceutical industry is patent intensive. On this point, research has shown that numerous patents apply to top-selling drugs.<sup>135</sup> Furthermore, in general, the high cost of getting a drug to market, coupled with (in many instances) low imitation costs, means that originator pharmaceutical companies need patent protection on new drugs (or new uses of old drugs) to ensure they can obtain a return on their investment in developing them.<sup>136</sup> Similarly, as discussed below in greater detail, it is very common for doctors to make off-label prescriptions,<sup>137</sup> and, as discussed in chapter 4, pill-splitters are widely used and it is normal practice for pharmacists to dispense generic versions of drugs (if one is available) if a patient is consulted.<sup>138</sup>

In this context, then, it is quite likely that a court would find a generic pharmaceutical company that did not canvass whether a drug they intended to supply could be used to infringe a patent would satisfy the two requirements outlined in *Global-Tech Appliances Inc v SEB SA*. That is, first, due to the expectation of patent protection and off-label use of drugs, a court would likely find that a generic

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<sup>130</sup> Ibid 2070.

<sup>131</sup> Ibid 2070–2.

<sup>132</sup> Ibid 2071.

<sup>133</sup> Ibid.

<sup>134</sup> Ibid.

<sup>135</sup> See for eg, Christie et al, 'Patents Associated with High-Cost Drugs in Australia' (2013) 8(4) *PLoS One* <<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0060812>>.

<sup>136</sup> Levin et al, 'Appropriating the Return from Industrial Research and Development' (1987) 3 *Brookings Papers on Economic Activity* 783, 797, 811; see also, Mansfield et al, 'Imitation Costs and Patents: An Empirical Study (1981) 91 *The Economic Journal* 907, 913–4; Arora et al, 'R&D and the Patent Premium' (2003) NBER (Working Paper 9431, The National Bureau of Economic Research, November 2004) 35–6; cf Yi Qian, 'Do Additional National Patent Laws Stimulate Domestic Innovation in a Global Patenting Environment' (2007) 89(3) *Review of Economics and Statistics* 436, 450; Nicol et al, *The Innovation Pool in Biotechnology: the Role of Patents in Facilitating Innovation*, Centre for Law and Genetics Occasional Paper No. 8 (2014) 81–2 <[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2503314](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2503314)>.

<sup>137</sup> See part IV.

<sup>138</sup> See Chapter 4 pt II A.

pharmaceutical company would subjectively believe that there is a high chance that a patent exists for any government-approved use of a given drug. Second, by not searching for patents on a drug they intended to supply, and not considering how it could be used in an infringing action, a court would likely find that they took deliberate actions to avoid learning of it. Thus, due to the wilful blindness element of US law, there is a good argument that generic pharmaceutical companies are always ‘aware’ of infringing uses of drugs. It follows, that since the US subjective mental requirement is likely to be satisfied when drugs are supplied that have infringing uses, if the US knowledge requirement existed in Australian law when *AstraZeneca*, *Otsuka* and *Lambert* were decided, it is unlikely the mechanism would have altered the Courts’ findings regarding s 117(2)(b) infringement.

In summary, the analysis in this part on the mental elements in the US and UK suggests that neither approach would have altered the findings on s 117(2)(b) liability in the Australian cases.

#### B. ‘Staple Articles’ and ‘Staple Commercial Products’

The definition of ‘staple commercial products’ in s 117(2)(b) is a key factor in limiting supply infringement for products with more than one use. This occurs because, if a product can be classified as a ‘staple commercial product’, then supply of that product is exempt from infringement under the provision. However, as outlined above, prescription drugs are, as a general rule, classified as non-staple commercial products and therefore supply of them raises the prospect of s 117(2)(b) infringement.<sup>139</sup> Would a foreign approach to the ‘staple commercial products’ test alter liability in the Australian cases?

As elucidated above, the UK definition of ‘staple commercial products’ specifically adopted the Australian interpretation, thus application of the UK test would effect the same result. By contrast, the US ‘staple articles’ test is quite different. In the US case of *Vita-Mix Corp v Basic Holding Inc*,<sup>140</sup> the Federal Circuit said that ‘staple articles’ are those with substantial non-infringing uses and ‘non-infringing uses are substantial when they are not unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental.’<sup>141</sup> The interpretation of this requirement is quite different to the Australian test of ‘staple commercial products’. Thus it is necessary to consider how it might have altered liability in *AstraZeneca*, *Otsuka*, and *Lambert* if it existed in s 117(2)(b).

The facts provided in the *Otsuka* decision disclosed that the drug in question, aripiprazole, had medically approved non-infringing uses to treat schizophrenia at various stages of the disease.<sup>142</sup> Evidence was also provided which suggested the non-infringing uses were more common than the

<sup>139</sup> See, Chapter 4 pt II.

<sup>140</sup> *Vita-Mix Corp v Basic Holding Inc*, 581 F 3d 1317 (Fed Cir, 2009).

<sup>141</sup> *Ibid* 1327.

<sup>142</sup> *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd* (2012) 291 ALR 763, 768–9.

infringing ones.<sup>143</sup> Similarly, in *AstraZeneca*, the evidence suggested that there were as many non-infringing uses for the drug, rosuvastatin, as there were infringing ones.<sup>144</sup> Since millions of dollars are spent on each drug annually in Australia,<sup>145</sup> the evidence of these non-infringing uses strongly suggests the drugs would be classified as ‘staple articles’ and therefore exempt from supply infringement liability. Thus, clear grounds exist indicating the US ‘staple articles’ test would alter liability in these cases.

The case of *Lambert* is more complicated. The market for the non-infringing use of pregabalin in preventing seizures was government approved,<sup>146</sup> but the quantity of use for this non-infringing purpose was also described as ‘very small’.<sup>147</sup> The exact amount of the non-infringing use was not accurately determined by the Court, but it did consider that there was ‘essentially no market for pregabalin in Australian as an anti-seizure medication’.<sup>148</sup> This means it is difficult to determine with any confidence whether the non-infringing uses of pregabalin would qualify it as a ‘staple article’ or not. But it does raise the possibility that such use could be classified as ‘occasional’ or ‘aberrant’. On this point, the Federal Circuit case, *i4i Ltd Partnership v Microsoft Corp*,<sup>149</sup> illustrates how a legitimate use may not qualify a product as a ‘staple article’. In this case, although the defendant supplied software that could be used for an infringing use, they contended that it was a ‘staple article’ because it had non-infringing uses.<sup>150</sup> On this point, the Federal Circuit unanimously upheld the jury’s finding that the non-infringing uses were not substantial because there was insufficient evidence that the non-infringing uses were practical or useful.<sup>151</sup> Regarding the facts in *Lambert*, if the non-infringing uses were classified as ‘occasional’ or ‘aberrant’ then, supply of pregabalin would raise the possibility of supply infringement liability under this test.<sup>152</sup> Nevertheless, regardless of the exact application of the test to the facts in *Lambert*, the analysis in this section does show that the US ‘staple articles’ mechanism could have resulted in a different outcome on s 117(2)(b) liability for the Australian cases, albeit perhaps only two of them.

<sup>143</sup> See, *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* [2015] FCA 634 (29 June 2015) [200]–[249] (Yates J).

<sup>144</sup> *Apotex Pty Ltd v AstraZeneca AB* (2013) 100 IPR 285, 408–9.

<sup>145</sup> See for eg, Department of Health, *Australian Statistics on Medicine 2011*, (2013), 158 <<http://www.pbs.gov.au/statistics/asm/2011/australian-statistics-on-medicines-2011.pdf>>; Department of Health, *Expenditure and Prescription Twelve Months to 30 June 2013* (2013) 11 <<http://www.pbs.gov.au/statistics/2012-2013-files/expenditure-and-prescriptions-12-months-to-30-06-2013.pdf>>.

<sup>146</sup> *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632, 638.

<sup>147</sup> *Ibid* 647–8, 653 (Allsop CJ, Jagot and Nicolas JJ).

<sup>148</sup> *Ibid* 648.

<sup>149</sup> *i4i Ltd Partnership v Microsoft Corp*, 598 F 3d 831 (Fed Cir, 2010).

<sup>150</sup> *Ibid* 851.

<sup>151</sup> *Ibid*.

<sup>152</sup> Other non-infringing uses for treating depression, anxiety and bipolar disorders also exist, but no substantial evidence was led of them: *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632, 638, 650.

### C. Implied Licences

The basis for the implied licence arguments in the UK is the passage in s 60(2) of the *Patents Act 1997* (UK), ‘supplies... a person other than a licensee’. Section 117(1) of the *Patents Act* does contain a passage relating to whether suppliers are licensed, but it does not contain an equivalent passage to this UK phrase, referring to whether persons supplied are licensed. Notwithstanding this lack of explicit legislation, there is quite a strong line of reasoning that suggests implied licences affect the operation of s 117 in a similar manner to the way they do in the UK.

The starting point for arguing implied licences under s 117 is that, in the High Court case of *Northern Territory v Collins*, Crennan and Hayne JJ (in separate judgments), specified that supply infringement under s 117 can only occur when infringement within the meaning of s 13 also occurs.<sup>153</sup> It follows, then, that since a person cannot infringe a patent if they are licensed,<sup>154</sup> by corollary, supply infringement cannot be found when the person supplied with a product is licensed to use it in a way that is otherwise infringing. Once it is established that supply of a product to a person who is licensed to use the product for a purpose protected by patent rights does not give rise to infringement liability under s 117, the next relevant question is, in what circumstances are implied licences found in Australia?

Although implied licences are infrequently argued in Australian patent law, they are quite well established. In *National Phonograph Co of Australia v Menck* (a Privy Council case on appeal from the High Court of Australia),<sup>155</sup> the unanimous Privy Council said that patented goods, once purchased with the patentees authorisation, can be used for any means the buyer desires except for any restrictions that may be put in place by the patentee and are bought to the purchaser’s attention.<sup>156</sup> The significance of this conclusion by the Privy Council is that it is broadly analogous to Lord Hoffman’s explanation of the law in *United Wire v Screen Repair Services (Scotland Ltd)*. As outlined above in more detail, Lord Hoffman said that, in the absence of a restriction bought to a purchasers’ attention, implied licences permit purchased products to be used in any way purchasers please.<sup>157</sup>

<sup>153</sup> *Northern Territory v Collins* (2008) 235 CLR 619, 629 (Hayne J), 642 (Crennan J, with whom Heydon J agreed: at 630, 634; *Patents Act 1990* (Cth) s 13(1), sch 1 (definition of ‘exploit’); see also, *Apotex Pty Ltd v Sanofi-Aventis Australia Pty Ltd* (2013) 304 ALR 176 (Crennan and Kiefel JJ), 79 (Gageler J agreeing with Crennan and Kiefel JJ on this point); Chapter 3 pt II C.

<sup>154</sup> *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15, 21–4.

<sup>155</sup> *Ibid.*

<sup>156</sup> *Ibid* 23–24. See also, *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534, 540–01 (Gibbs J), 548–53 (Stephen J), 555–6 (Jacob J agreeing with Stephen J); *Copyright Agency Ltd v New South Wales* (2008) 233 CLR 279, 304; *Beck v Montana Constructions Pty Ltd* (1963) 5 FLR 298, 304 (Jacobs J); see generally, Peter Heerey and Nicole Malone, ‘RPM for RPM: National Phonograph Company of Australia v Menck’ in Kenyon, Richardson and Ricketson, *Landmarks in Australian Intellectual Property Law* (Cambridge University Press, 2009) 37.

<sup>157</sup> *United Wire v Screen Repair Services (Scotland Ltd)* [2000] 4 ALL ER 353, 357. The outcome that they have similar operation is not all that surprising given the case of *Betts v Wilmott*,<sup>157</sup> is a well precedent in Australia and the UK, see, *United Wire v Screen Repair Services (Scotland Ltd)* [2000] 4 ALL ER 353, 358; *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15, 24–5.



Despite the fact similar law is likely to direct how and when implied patent licences will be found in Australia and the UK, since implied licences were not raised in *AstraZeneca*, *Otsuka*, or *Lambert* it is useful to consider how this legal mechanism might have influenced the outcomes of these cases. On this point, an argument could be put forward that if a patient obtains a drug without notice of any restrictive conditions, they are impliedly licensed to use it as they please, and therefore supply infringement cannot arise. However, this argument misunderstands the operation of implied licences. As specified in *National Phonograph Co of Australia v Menck*, implied licences only arise when a patentee impliedly licenses a purchaser to use a product<sup>158</sup> - a supplier who is not a patentee cannot grant a license (impliedly or otherwise). Thus, given the cases of *AstraZeneca*, *Otsuka* and *Lambert* do not involve supply of drugs (or any other products) by patentees, implied licence arguments are irrelevant, and therefore it is difficult to see how they could alter liability.

#### D. Means Suitable for Putting the Invention into Effect

As outlined in part 2, the phrase in s 60(1) of the *Patents Act 1997* (UK), ‘means suitable for putting ... the invention into effect’, has been interpreted to require direct infringement as a necessary element in proving supply infringement. In *Schütz* and *Nestec*, this requirement then led to the intricate interpretation of ‘make’ by the Courts in those cases. These outcomes raise the prospect that if the UK passage existed in s 117(2)(b), it might alter the operation of the provision and require Australian courts to consider a similar issue. However, notwithstanding that s 117(2)(b) does not include the specific UK legislative language that led to this interpretation, like the argument for implied licences in s 117, there is quite a strong argument that the UK approach to ‘make’ already exists in Australian law in some form too.

Before describing this argument, though, a short aside needs to be made. As the s 117(2)(b) actions in *AstraZeneca*, *Otsuka* and *Lambert* all involved method claims, any argument that the claims were ‘made’ is irrelevant because such claims are infringed when they are ‘used’, not ‘made’.<sup>159</sup> ‘Make’, as *Schütz* and *Nestec* demonstrate, is only relevant to product claims.<sup>160</sup> However, despite the irrelevance of ‘make’ arguments to the Australian cases, it is still useful to outline how ‘make’ arguments operate with regard to s 117. There are two reasons for this. First, it is useful to understand all dimensions of the provision when considering law reform. Second, similar problems to those described in chapter 4 in regarding *AstraZeneca*, *Otsuka* and *Lambert* could also arise with product claims. For example, as illustrated between the Court of Appeal decision and the Supreme

<sup>158</sup> *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15, 24–5.

<sup>159</sup> *Patents Act 1990* (Cth) s 13(1), sch 1 (definition of ‘exploit’); infringement of method patents can also be found if the ‘product resulting’ from use of the method is sold or used (see Chapter 3 pt II A), however, this type of infringement by exploitation was not argued in the Australian cases: see generally, *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd* (No 4) [2015] FCA 634 (29 June 2015); *AstraZeneca AB v Apotex Pty Ltd* (2014) 226 FCR 324; *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632.

<sup>160</sup> *Patents Act 1990* (Cth) s 13(1), sch 1 (definition of ‘exploit’).

Court appeal in *Schütz*,<sup>161</sup> the arguments concerning whether the invention was ‘made’ was the only issue that prevented a finding of infringement.<sup>162</sup> Thus, in this sense, arguments concerning ‘make’ illustrate important limits on the operation of the provision that have not been articulated in case law in Australia. Indeed, as explored below, such arguments are important in balancing the ability of non-patentees to supply parts that are used to repair patented items, with the right of patentees to prevent infringement of their rights.

The starting point for ‘make’ style arguments in s 117 is the passage in s 117(1), ‘[i]f the use of a product by a person would infringe a patent’. High Court decisions have held that this passage requires that infringement by exploitation has, or will, occur as a necessary element of supply infringement.<sup>163</sup> Thus, in this sense, it is equivalent to the passage in s 60(1) of the UK Act, ‘means suitable for putting ... the invention into effect’, which the Court in *Schütz* held required direct infringement. Also in like manner to the UK legislation, Australian patentees are equipped with the right to exclude others from ‘making’ their invention.<sup>164</sup> Accordingly, the requirement for infringement by exploitation in s 117(1), coupled with the right to exclude others from ‘making’ the invention, means that the *Patents Act* effectively has the same legislative framework that led to the intricate ‘make’ arguments in the UK. Despite this, no Australian case has explored the definition of ‘make’ in the same way as the UK cases.<sup>165</sup> What perhaps explains this difference in decided cases is that no Australian court has had to consider facts like those in *Nestec*, in which the supply of consumables was necessary for an invention’s operation, or *Schütz*, which concerned the supply of a key structural component of an invention that had worn out.<sup>166</sup>

Despite the fact Australian courts have not been charged with considering facts and arguments like those presented in *Nestec* and *Schütz*, there is basis to expect that if they were, a similar type of reasoning would be engaged with. A key element in the development of the current approach to ‘make’ in the UK is the case of *Solar Thomson Engineering Co Ltd v Barton*.<sup>167</sup> In this case, Graham J (with whom Orr and Goff LJ agreed)<sup>168</sup> held that purchasers had an implied licence to repair patented goods.<sup>169</sup> This case is regularly cited in the UK,<sup>170</sup> and it is also been approved of in

<sup>161</sup> *Schütz (UK) Ltd v Werit UK Ltd* [2011] Bus LR 1510.

<sup>162</sup> See generally, *ibid*, especially, 1521–30 cf, *Schütz (UK) Ltd v Werit UK Ltd* [2013] 2 ALL ER 177.

<sup>163</sup> *Northern Territory v Collins* (2008) 235 CLR 619, 629 (Hayne J), 642 (Crennan J, with whom Heydon J agreed: at 630, 634); *Apotex Pty Ltd v Sanofi-Aventis Australia Pty Ltd* (2013) 304 ALR 176 (Crennan and Kiefel JJ), 79 (Gageler J agreeing with Crennan and Kiefel JJ on this point).

<sup>164</sup> *Patents Act 1990* (Cth) sch 1 (definition of ‘exploit’).

<sup>165</sup> Various cases have considered the definition of make, just not in the same way, see, Chapter 2 pt 1 A; in particular see, *Walker v Alemite Corp* (1933) 49 CLR 643, 657–8 (Dixon J); *Bedford Industries Rehabilitation Association Inc v Pinefair Pty Ltd* (1998) 87 FCR 458, 464 (Foster J), 469 (Mansfield J), 479–80 (Goldberg J).

<sup>166</sup> For a non-supply infringement context, see also, *United Wire v Screen Repair Services (Scotland Ltd)* [2000] 4 ALL ER 353.

<sup>167</sup> *Solar Thomson Engineering Co Ltd v Barton* [1977] RPC 537.

<sup>168</sup> *Ibid* 561.

<sup>169</sup> *Ibid* 547–8.

Australia. In the Australian High Court case, *Concrete Pty Ltd v Parramatta Design & Developments Pty Ltd*, Kirby and Crennan JJ in obiter specifically approved of the right to repair articulated by Graham J.<sup>171</sup> The importance of this case in both countries suggests a common thread in law. However, whereas no Australian case has pursued this point, UK decisions have continued to advance the concept. This advance was most visibly demonstrated in *United Wire v Screen Repair Services (Scotland Ltd)*,<sup>172</sup> where Lord Hoffman continued to develop the idea of the implied right to repair and characterised it as ‘a residual right, forming part of the right to do whatever does not amount to *making* a product.’<sup>173</sup> In *Schütz*, Lord Neuberger approved Lord Hoffman’s distinction and in asking whether a product is ‘made’, considered the question of whether a product is ‘repaired’ as an indicator of whether it is ‘made’.<sup>174</sup>

If the facts and arguments in *Nestec* or *Schütz* were before an Australian court, it is difficult to predict whether the court would apply reasoning akin to the UK approach to ‘make’, or, apply a ‘right to repair’ assessment (as appeared to be endorsed by Kirby and Crennan JJ). Nevertheless, for the purposes of this chapter, it is not relevant to pursue which line of reasoning should be preferred, or is likely to be adopted. To re-iterate, it is whether foreign law would assist in balancing the operation of s 117(2)(b). On this point, Lord Hoffman in *United Wire v Screen Repair Services (Scotland Ltd)* stated, ‘[r]epair is one of the concepts (like modifying or adapting) which shares a boundary with “making” but does not trespass upon its territory’. If it is assumed that Lord Hoffman’s description of ‘repair’ is an accurate description of the boundaries of the (unconfirmed) implied right in Australian law, then, this would mean if a court did adopt a ‘right to repair’ approach, a finding of being impliedly allowed to repair an item would overlap with *not* ‘making’ it. Thus, the reasoning demonstrated in *Nestec* and *Schütz* is likely to exist in Australia in some form, regardless of whether an Australian court adopts a right to repair approach or incorporates such analysis into an assessment of ‘make’.

#### E. Essential Element & Material Part

The interpretation of the US ‘material part’ requirement, and the interpretation of the UK ‘essential element’ requirement, arguably both play similar roles in supply infringement. That is, both ensure that the product supplied is, on some level, part of the invention claimed. To briefly reiterate what was said above, in *Fujitsu Ltd v Netgear Inc* a data defragmenter was found not to be a ‘material part’ of a patented invention because it was not mentioned in the claims. In *Nestec*, Arnold J held that if a supplied product was ‘completely subordinate’ to the technical teachings of a patent, then it would not constitute an ‘essential element’. Applying this reasoning to the facts, his Honour found that

<sup>170</sup> It was analysed in some detail in *Schütz (UK) Ltd v Werit UK Ltd* [2013] 2 ALL ER 177, see 190, 196; see also, *United Wire v Screen Repair Services (Scotland Ltd)* [2000] 4 ALL ER 353, 357–8.

<sup>171</sup> *Concrete Pty Ltd v Parramatta Design & Developments Pty Ltd* (2006) 229 CLR 577, 596.

<sup>172</sup> *United Wire v Screen Repair Services (Scotland Ltd)* [2000] 4 ALL ER 353.

<sup>173</sup> Ibid 358 (emphasis added).

<sup>174</sup> *Schütz (UK) Ltd v Werit UK Ltd* [2013] 2 ALL ER 177, 191.

because the coffee capsules in *Nestec* had a flange that guided them into the coffee extraction system, as specified in the claims,<sup>175</sup> the capsules constituted an essential element.

Neither the US or UK mechanism exists in s 117(2)(b), thus it is necessary to consider whether these requirements might have altered liability in *AstraZeneca*, *Otsuka* and *Lambert*. In *Otsuka*, aripiprazole was a key component of treating schizophrenia in infringing circumstances and was specifically mentioned in the relevant claims.<sup>176</sup> Likewise, rosuvastatin was a key part of the patented method to lower cholesterol and was mentioned in the claims in *AstraZeneca*,<sup>177</sup> and pregabalin was a key part of a patented method to treat pain and was mentioned in the claims in *Lambert*.<sup>178</sup> It follows, then, that the drugs are likely to constitute a ‘material part’ of the inventions in question since they are mentioned in the claims of all three cases. Similarly, they are each likely to constitute an ‘essential element’ because they are pivotal factors in each patented treatment.<sup>179</sup> As a result, if either of these mechanisms existed in s 117(2)(b), it is unlikely that they would have altered the outcomes of the Australian cases.

#### F. Carve Out

As outlined in part 2, the Australian Pharmaceutical Patent Review (the ‘PPR’) recommended introducing a US style carve out into s 117.<sup>180</sup> The recommendation by the PPR was that a ‘reasonable steps’ test should be incorporated into s 117, to relieve generic pharmaceuticals companies from supply infringement liability if they take reasonable measures to ensure that products supplied are only used for non-patented purposes.<sup>181</sup> However, the PPR did not propose a specific amendment, stating, ‘[u]ltimately what constitutes a “reasonable step” will depend on the circumstances, and in the event of any infringement proceedings, would be a matter for the court.’<sup>182</sup> Despite this, the PPR did indicate that ‘clear labelling of indications which does not include infringing uses’,<sup>183</sup> should generally satisfy the carve out. Whilst this carve out seems relatively simple to apply, before analysing whether it might change liability in *AstraZeneca*, *Otsuka*, and *Lambert*, further preliminary details need to be outlined.

First, it should be noted that the ‘reasonable steps’ test proposed by the PPR is not a carve out in the mould of the US legislation. As outlined above, the carve out in that jurisdiction operates via labelling

<sup>175</sup> *Nestec SA v Dualit Ltd* [2013] EWHC 923 (Pat) [69].

<sup>176</sup> *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* [2015] FCA 634 (29 June 2015) [98]–[99] (Yates J).

<sup>177</sup> *AstraZeneca AB v Apotex Pty Ltd* (2014) 226 FCR 324, 329, 335 (Besanko, Foster, Nicholas and Yates JJ).

<sup>178</sup> *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632, 633 (Allsop CJ, Jagot and Nicholas JJ).

<sup>179</sup> Whether or not these mechanisms may solve other, related problems with the operation of s 117(2)(b) are something that should be borne in mind as future cases are decided. See also, Ann Monotti, ‘Contributory Infringement of a Process Patent under the *Patents Act 1990*: Does it Exist After Rescare?’ (1995) 6 *Australian Intellectual Property Journal* 217, 228; Ann Dufty, *Report to the Industrial Property Advisory Committee* (Monash University Law School, 1983) vol 1, 267–72.

<sup>180</sup> Australian Government, *Pharmaceutical Patents Review* (Canberra, May 2013) 138–40.

<sup>181</sup> *Ibid* 111, 138–40.

<sup>182</sup> *Ibid*.

<sup>183</sup> *Ibid*.

and the specific approval sought, and only exempts applications to supply generic drugs from liability under 35 USC 271(e)(2). The proposed Australian carve out does not operate in this way. As the PPR describes, it would carve out liability from s 117 and operate via a reasonable steps test, which, the PPR suggests, should be satisfied by labelling generic branded drugs with only non-infringing uses.<sup>184</sup>

This distinction raises another point, namely, whether or not the carve out should only apply to drugs. The US carve out only applies to drugs,<sup>185</sup> and the PPR only discussed it with reference to drugs.<sup>186</sup> There is little doubt that pharmaceuticals are a particularly valuable type of ‘non-staple commercial product’ with both infringing and non-infringing uses. Despite this, though, presumably other valuable products exist that have these characteristics. For example, it is likely that various non-medicinal chemicals, such as herbicides or scientific reagents, would have such characteristics. Thus, in the absence of cogent reasons to limit the carve out to pharmaceuticals, it does appear it should apply to all products.

With the ambit and operation of the carve out better defined, it is necessary to analyse whether it might have altered liability in *AstraZeneca*, *Lambert* or *Otsuka*. In *Lambert*, the generic pregabalin to be supplied was going to be labelled only for the non-infringing use of seizures.<sup>187</sup> In addition, the generic party intended to send letters to doctors and pharmacists instructing them not to supply the drug for infringing purposes.<sup>188</sup> Thus, there is a strong argument that the labels and letters would satisfy the reasonable steps test and supply would be exempt from infringement under s 117(2)(b) (if it incorporated a reasonable steps test). In *AstraZeneca* and *Otsuka*, no evidence was led of labelling.<sup>189</sup> Despite this, the generic companies in *AstraZeneca* and *Otsuka* did propose sending letters to doctors and pharmacists instructing them to only prescribe (or dispense) the generic-labelled drugs for non-infringing purposes.<sup>190</sup> Supposing the contents of these letters could also be reproduced in labels, then it stands to reason that supply of these drugs could be exempt from s 117(2)(b) liability as well.

**Table 5** summarises the analysis in this part on whether any of the foreign legal mechanisms might have altered supply infringing liability in *AstraZeneca*, *Otsuka*, or *Lambert*.

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<sup>184</sup> Ibid 140.

<sup>185</sup> 35 USC 271(e)(2).

<sup>186</sup> Australian Government, *Pharmaceutical Patents Review* (Canberra, May 2013) 138–40.

<sup>187</sup> *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 106 IPR 59, 62, 69–73.

<sup>188</sup> Ibid.

<sup>189</sup> In *Apotex Pty Ltd v AstraZeneca AB* (2014) 100 IPR 285 (2013) 100 IPR 285, the generic parties did propose excluding the infringing purpose of using 20 and 40mg dosages of rosuvastatin to treat a form of hypercholesterolemia from the label (see at 412), but infringement of this patent was not pursued on appeal.

<sup>190</sup> *Apotex Pty Ltd v AstraZeneca AB* (2014) 100 IPR 285 (2013) 100 IPR 285, 411; *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd* (2013) 296 ALR 50, 60–1.

Table 5 Legislative mechanisms from the UK and US, and whether they might alter s 117(2) infringement liability in *AstraZeneca*, *Lambert* or *Otsuka*

Legal Mechanism	Comments Re: Altering liability in <i>AstraZeneca</i> , <i>Lambert</i> & <i>Otsuka</i>
UK mental element	✗ Unlikely to alter liability in <i>AstraZeneca</i> , <i>Otsuka</i> and <i>Lambert</i>
US subjective mental element	✗ Irrelevant to permanent injunctive relief. Due to its wilful blindness component, probably not applicable to supply of drugs either
Staple articles <sup>191</sup>	✓ Would probably alter liability in <i>AstraZeneca</i> and <i>Otsuka</i> . Questionable whether it would alter liability in <i>Lambert</i>
Implied licences	✗ Likely to already exist in Australian law and not applicable to the facts in <i>AstraZeneca</i> , <i>Lambert</i> or <i>Otsuka</i>
Means suitable for putting the invention into effect	✗ Likely to already exist in Australian law in some form, and not applicable to the patent claims <i>AstraZeneca</i> , <i>Lambert</i> to <i>Otsuka</i>
Essential element & material part	✗ Unlikely to alter liability in <i>AstraZeneca</i> , <i>Lambert</i> and <i>Otsuka</i>
Carve out	✓ Likely to alter liability in <i>AstraZeneca</i> , <i>Lambert</i> and <i>Otsuka</i>

#### IV. Which Mechanism(s) Best Fit the Benchmarks?

In part 3, two mechanisms were identified that plausibly could have altered liability in at least one of the cases of *AstraZeneca*, *Lambert* or *Otsuka*. They were, the US ‘staple articles’ requirement and the carve out. As outlined in the introduction to this chapter, this part evaluates whether these mechanisms enhance the legislature’s original justifications to enact supply infringement, namely, to create a more ‘certain’ and a ‘more effective, realistic and just’ enforcement system. The benchmark of a ‘more effective, realistic and just’ enforcement system was reasonably well articulated in the introduction – that is, balancing patent protection of second medical use patents, with the supply of generic-labelled drugs. Before proceeding though, it is useful to briefly revisit the conclusions that were reached in chapter 4 regarding ‘certainty’.<sup>192</sup>

When the Australian government first mentioned the justification of ‘certainty’, it was prior to any type of supply infringement legislation existing, and was referring to whether liability could be found in any circumstances when non-patented products were supplied that could be used for infringing

<sup>191</sup> ‘Staple commercial products’ in the UK is not in this table because it is currently interpreted to operate the same way as in Australia.

<sup>192</sup> See Chapter 4 pt III B.

purposes.<sup>193</sup> Clearly, this is not the case now, as s 117 specifically creates liability for supply in certain circumstances. However, the new issue with ‘certainty’ is that the case law is quite complex and, for lawyers and other parties that engage with patents, but who are not necessarily well versed in recent case law, the situation is likely to be quite confusing and less than certain.<sup>194</sup> As summarised in chapter 4, whether supply of a drug will constitute infringement under s 117(2)(b) depends on a range of considerations including: whether doctors are advising patients to split pills; whether doctors will ignore labels; and knowledge of how doctors treat variations of certain diseases.<sup>195</sup> Thus, the ‘certainty’ element of the law can be improved by making it easier to understand when supply of generic-labelled drugs will be infringing or not.

As detailed above, if the US ‘staple articles’ mechanism existed in s 117(2)(b), supply of generic branded rosuvastatin (from *AstraZeneca*) and aripiprazole (from *Otsuka*) would likely be permitted. However, pregabalin (from *Lambert*) may still be restricted – the evidence of its non-infringing use suggested it was quite limited, thus whether or not it would be classified as a ‘staple-article’ is not clear. As a result, from the benchmark of ‘certainty’, the liability in *AstraZeneca* and *Otsuka* is quite clear (it will not arise) but in *Lambert* it is more ambiguous. Although liability for supplying pregabalin is not clear at the moment, there is substantial law on what constitutes a ‘staple product’ in the US.<sup>196</sup> Consequently, it is quite likely that if better evidence of the non-infringing uses of pregabalin was tendered in evidence, then this question could be resolved with a relatively high degree of precision and therefore the mechanism would engender a high degree of certainty.

On whether the US ‘staple articles’ mechanism would create a ‘more effective, realistic and just’ enforcement system, the primary consideration is whether patent protection for drugs with second medical uses is balanced with supply of the same drug for non-infringing uses. On this point, because rosuvastatin and aripiprazole have substantial non-infringing uses, a US ‘staple articles’ test will exempt supply from s 117(2)(b) liability without requiring suppliers to take any actions to avoid infringement. One outcome of this test suggesting that it is ‘realistic and just’ is that this test will mean generic pharmaceutical companies will not be held liable when doctors or pharmacists authorise or join in a common design with patients to infringe. However, this test also means that the ‘staple articles’ test does not offer any s 117(2)(b) protection for drugs in second medical use patents if they have substantial non-infringing uses. It follows, then, that although this mechanism avoids the problems articulated in chapter 4, it does not necessarily balance interests particularly

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<sup>193</sup> Statement by the Minister for Science, ‘Government Response to the Report of the Industrial Property Advisory Committee, “Patents, Innovation and Competition in Australia”’, (1986) 56 *Official Journal of Patents, Trade Marks and Designs* 1462, 1477; see also Ann Monotti, ‘Contributory Infringement of a Process Patent under the *Patents Act 1990*: Does it Exist After *Rescare*?’ (1995) 6 *Australian Intellectual Property Journal* 217, 217–8.

<sup>194</sup> See, Chapter 4 pt III B.

<sup>195</sup> *Ibid.*

<sup>196</sup> See, Donald S Chisum, LexisNexis, *Chisum on Patents* (at Release 130-11/2011) § 17.03[3].

well because without liability potentially arising under s 117(2)(b), many secondary medical use patents will have little effective protection.

When the carve out is measured against the same rationales, the outcome is slightly different. As analysed above, the carve out would have likely altered liability in *AstraZeneca*, *Lambert* and *Otsuka*. This means that the supply of generic-labelled drugs, with appropriate labels, is likely to be exempt. Due to the simplicity of attracting the protection of the carve out through labelling, it also follows that the benchmark of certainty is likely to be met, because this outcome is quite clear and relatively easy to achieve. However, whether the carve out meets the rationale of a ‘more effective, realistic and just’ enforcement system is slightly more complicated, and warrants close examination.

Ostensibly, the carve out effectively balances the interests of generic pharmaceutical companies and originator pharmaceutical companies. It does this by allowing generic companies to provide drugs with labels limiting them to non-infringing uses, and therefore only allows patentees to supply drugs with labels for patented uses. Thus, both problems articulated in chapter 4 are avoided. However, as the facts from *AstraZeneca*, *Otsuka* and *Lambert* demonstrate, whilst the carve out may balance interests on paper, it may not in practice. In *AstraZeneca*, the Full Federal Court held that it was likely rosuvastatin would be used for its infringing use because doctors and pharmacists knew it was cheaper to prescribe the generic drug and get patients to split the pills in half,<sup>197</sup> thus it is questionable whether a label stating generic rosuvastatin is only to be used for a non-infringing use would affect this conduct. A similar analysis applies to *Otsuka*, except for a different reason. In that case, Yates J found that the infringing use would occur for therapeutic reasons, as doctors switched drugs to optimise patient responses.<sup>198</sup> Thus, as there is no evidence of doctors referring to labels when making this switch, it is questionable whether labels, apparently delimiting certain products to non-infringing uses, will reduce the frequency of generic-labelled drugs being put to infringing uses. Moreover, this issue was perhaps most vividly demonstrated in *Lambert*. One of the Court’s reasons for finding a prima facie case of s 117(2)(b) infringement was that evidence from a pharmacist said that when dispensing, labels delimiting pregabalin to certain uses would not deter pharmacists from dispensing a generic version of the drug.<sup>199</sup>

More broadly, off-label prescriptions are quite common and are particularly prevalent in some areas of medicine. A review of medical literature has found that it can vary from 7.5% to 40% of all prescriptions in adults.<sup>200</sup> They are also common in paediatrics where drugs have been approved for

<sup>197</sup> *AstraZeneca AB v Apotex Pty Ltd* (2014) 226 FCR 324, 418–419.

<sup>198</sup> *Otsuka Pharmaceutical Co Ltd v Generic Health Pty Ltd (No 4)* [2015] FCA 634 (29 June 2015) [52], [199], [214].

<sup>199</sup> *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632, 651–2.

<sup>200</sup> Gazarian et al, ‘Off-label Use of Medicines: Consensus Recommendations For Evaluating Appropriateness’ (2006) 185(10) *Medical Journal of Australia* 544, 544; see also, Krzyzanowska et al, ‘Off-Label Use of Cancer Drugs: A Benchmark is Established’ (2013) 31(9) *Journal of Clinical Oncology* 1125, 1125.



treating adults, but not yet for children.<sup>201</sup> In these circumstances, off-label prescriptions may occur up to 90% of the time.<sup>202</sup> While studies have delved into the occurrence of off-label prescriptions, demonstrating that they are quite commonly used, an examination of the literature does not show that authoritative data has been produced demonstrating how often off-label use results in patent infringement.<sup>203</sup> Indeed, it is interesting to note how infrequently patent infringement issues are mentioned in off-label literature. In this context, then, originator pharmaceutical companies with patents for secondary medical indications may argue that a carve out will not sufficiently balance patent interests because the labelling requirement in the 'reasonable steps' test will not, in many circumstances, alter doctors prescribing (or pharmacists dispensing) generic-labelled drugs for infringing purposes. On its face, this is an influential argument given the cost of producing drugs is estimated in the billions.<sup>204</sup> Nevertheless, it is submitted that the carve out is more 'effective, realistic and just' s 117(2)(b) for four reasons.

First, as demonstrated above, the carve out offers more protection to patentees than the 'staple articles' mechanism does in the US under § 271(c). This is because, under a 'staple articles' test, generic pharmaceutical companies would be able to supply the drug without limiting uses of their product on the label. Second, although it is expected that some infringing uses of generic-labelled drugs would occur in Australia under a 'reasonable steps' tests, there is no data to suggest that the financial losses patentees suffer due to infringement of second medical use patents is significant. On the other hand, the Australian Government and patients together spent over \$418 million on rosuvastatin in 2013, and testimony in *AstraZeneca* suggested that the non-infringing uses of it were more common than the infringing uses.<sup>205</sup> Moreover, the PPR outlined that when generic drugs enter markets they reduce drug prices by 25-50%.<sup>206</sup> It follows, then, that when generic pharmaceuticals enter markets for non-infringing uses, the public-orientated savings are significant.

Third, it is likely that a Court will find that a 'reasonable steps' test is more nuanced than the PPR suggests. The reason for this is that a 'reasonable steps' test that is directed towards ensuring that

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<sup>201</sup> Gazarian et al, 'Off-label Use of Medicines: Consensus Recommendations For Evaluating Appropriateness' (2006) 185(10) *Medical Journal of Australia* 544; Conti et al, 'Prevalence of Off-label Use and Spending in 2010 Among Patent-Protected Chemotherapies in a Population-Based Cohort of Medical Oncologist' (2013) 31(9) *Journal of Clinical Oncology* 1134, 1134-5; Rebecca Dresser and Joel Frader, 'Off-Label Prescribing: A Call for Heightened Professional and Government Oversight' (2009) 37(3) *Journal of Law, Medicine & Ethics* 476, 476-7.

<sup>202</sup> Ibid.

<sup>203</sup> Cf. Krzyzanowska et al, 'Off-Label Use of Cancer Drugs: A Benchmark is Established' (2013) 31(9) *Journal of Clinical Oncology* 1125, 1125.

<sup>204</sup> See generally, Joseph A DiMasi, Ronald W Hansen and Henry G Grabowski, 'The Price of Innovation: New Estimates of Drug Development Costs' (2003) 22(2), *Journal of Health Economics*, 151; Matthew Herper, 'The Cost of Creating a New Drug Now \$5 Billion, Pushing Big Pharma to Change' (8 November 2013) *Forbes* <<http://www.forbes.com/sites/matthewherper/2013/08/11/how-the-staggering-cost-of-inventing-new-drugs-is-shaping-the-future-of-medicine/>>.

<sup>205</sup> *Apotex Pty Ltd v AstraZeneca AB* (2014) 100 IPR 285 (2013) 100 IPR 285, 408-9.

<sup>206</sup> Australian Government, *Pharmaceutical Patents Review* (Canberra, May 2013) 37, 73-4.

products are only used for non-infringing purposes,<sup>207</sup> is likely to allow courts to consider any factors which it considers relevant to generic pharmaceutical companies avoiding infringing uses of their drugs. Whilst labelling is one type of measure to avoid infringing use, it is quite likely that other steps should be taken. Sending letters is one example already identified. However, in circumstances where a pill-splitter can be easily used, a court may find that a reasonable step would be to create a pill in a shape that cannot be easily split evenly. Admittedly, if changing the shape of a pill is classified as a 'reasonable steps' that should be taken, then there may be other steps that generic companies should take too. This may mean that the provision is less 'certain' than originally analysed. However, the primary reason to implement a reasonable steps test is to encourage companies to take all reasonable steps to avoid infringing use of their product. If changing the shape of a pill is cheap and effective and one that is apparent to generic pharmaceutical companies, then it makes sense that it is a step that should be taken.

Fourth, the liability of prescribing doctors and dispensing pharmacists must be engaged with. As argued in chapter 4, it is quite likely that in some circumstances they may be liable for patent infringement.<sup>208</sup> Clearly, pursuing doctors for patent infringement may not be a shrewd business decision for patentees. However, there are aspects to this liability that do not necessarily involve proving infringement in a court. Although these aspects take this discussion beyond patent law, and therefore beyond the scope of this thesis, given the subject matter it is suitable to briefly consider them. Relevantly, the evidence in *Lambert* indicating that pharmacists would dispense generic pregabalin for treatment outside of the uses stipulated on the label (or those instructed in a letter), was, in part, underpinned by the witness' belief that no ethical or legal obligations prevented them from doing so.<sup>209</sup> The converse of this evidence suggests that if there was a legal or ethical obligation to ensure drugs were only dispensed for non-infringing purposes then the resulting use of infringing use by patients may fall.<sup>210</sup> The logic here is that doctors and pharmacists are likely to follow ethical and legal obligations. Thus, it stands to reason that bringing the issue of doctors and pharmacists liability to the attention of relevant professional bodies, or perhaps just highlighting their key role in facilitating infringement by patients in a bid to change professional standards should be a way to reduce patent infringement.

A second non-patent law avenue that can be pursued by pharmaceutical companies to prevent infringing uses of drugs has been recently demonstrated in the UK. In the case of *Warner-Lambert Co LLC v Actavis Group PTC EHF*,<sup>211</sup> which concerned a second medical use patent for pregabalin, a

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<sup>207</sup> Ibid 139.

<sup>208</sup> See, Chapter 4 pt III A.

<sup>209</sup> *Warner-Lambert Co LLC v Apotex Pty Ltd* (2014) 311 ALR 632, 651.

<sup>210</sup> Ibid.

<sup>211</sup> *Warner-Lambert Co LLC v Actavis Group PTC EHF* [2015] EWHC 485 (Pat) (2 March 2015).

solution obtained by the patentee was to get the publicly funded health care system, the National Health Service, to issue guidance to doctors and pharmacists instructing them only to prescribe the originator's drug for the patented use.<sup>212</sup> The legal structure that permitted the Court to order the National Health Service to issue this guidance exists outside of patent law,<sup>213</sup> and it may be that the legal mechanisms that permitted this are limited to the UK. However, further research may show that such orders are desirable and feasible in Australia too.

Another non-patent law avenue that may warrant further investigation is based upon commentary in Europe. Brian Cordery, a global patent litigator, describes how European law was designed to carve out supply of drugs if labelled for non-infringing uses.<sup>214</sup> However, he also argues that this carve out provides insufficient protection for originator pharmaceutical companies because doctors and pharmacists will continue to prescribe and dispense generic-labelled drugs for infringing purposes<sup>215</sup> - a conclusion that overlaps with concerns described above. Indeed, Cordery asserts that, due to inadequate protection, originator pharmaceutical companies are now directing research and development resources towards new pharmaceuticals instead of investigating drugs with established safety records.<sup>216</sup> Rather than amending patent law to provide greater protection to patentees to fix this issue, he argues that:

it is likely that a fair solution to all parties cannot solely be achieved by revising pharmaceutical patent law and that it is necessary for there to be changes made to the way that medicines are prescribed, dispensed and reimbursed. For example, it is possible to conceive of a fair solution whereby a pharmacist is alerted to the indication for which a medicine is to be dispensed and will only be obliged to dispense the originator's medicine where the indication is for the new patented medical use. This would give the originator the exclusivity for the new indication whilst giving the generics companies legal certainty. Such a system ought not to compromise the physician's freedom to treat a patient according to the best of his or her skill and not place an undue burden on pharmacists or others involved in the supply of and payment for medicines.<sup>217</sup>

The question of whether or not Cordery's solution is actually possible would need to be pursued with input from various bodies, including doctors, pharmacists and government regulatory bodies. It would also require the production of software that could be updated remotely to notify pharmacists of changes in patents and uses of drugs. There is little doubt it would be a significant undertaking,

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<sup>212</sup> Ibid [32].

<sup>213</sup> Ibid [13]–[18].

<sup>214</sup> Brian Cordery, 'Use of Medicines for Carved Out Indications In Europe – Time For a Change in Approach?' (2013) 19 *Journal of Commercial Biotechnology* 55, 57; this carve out is described in more detail in, *Warner-Lambert Company LLC v Actavis Group Pte EHf* [2015] EWHC 72 (Pat) (21 January 2015) [17] (Arnold J).

<sup>215</sup> Ibid 57–8.

<sup>216</sup> Ibid 58.

<sup>217</sup> Ibid.

but it also has the capacity to better balance the various parties' interests in production of drugs. Thus, it is something that requires further investigation.

Putting the applicability of any non-patent law related mechanisms to balance the operation of s 117(2)(b) to one side, the analysis in this part suggests that although the 'staple articles' test and the carve out both have the ability to fix the problems with the current operation of s 117, the carve out appears to be the best solution.

### Conclusion – A Partial Solution?

The primary aim of this chapter was to identify a legislative amendment that could balance the operation of s 117(2)(b). Or, put more specifically, the aim was to balance the ability of generic pharmaceutical companies to supply drugs for non-infringing uses, without unfairly eroding protection for second medical use patents. To achieve this aim, this chapter has assessed how analogous legal provisions in the UK and US operate, and evaluated whether the legal mechanisms within them might have altered liability in the Australian cases that demonstrated the problems with s 117(2)(b). Following these steps, the mechanisms that could alter liability for those cases were then evaluated from the point of view of whether they met the legislature's criteria of 'certainty' and a 'more effective, realistic and just' enforcement system. At the end of this process, only the carve out, as recommended by the PPR as an equivalent to US legislation, appears to alter liability and meet the criteria. Although other non-patent law mechanisms may be needed to further balance the operation of interests in supplying drugs, the carve out balances the operation of the provision from a patent law point of view. Accordingly, law makers should proceed to drafting specific amending legislation as soon as possible.

## Chapter 6

# Re-evaluating Innocent Infringement in Australia: Patent Numbers & Virtual Marking<sup>1</sup>

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<sup>1</sup> This chapter has been published in, Johnathon E Liddicoat, 'Re-Evaluating Innocent Infringement in Australia: Patent Numbers and Virtual Marking' (2014) 24 *Australian Intellectual Property Journal* 18.

## Introduction

In the four preceding chapters of this thesis, various issues concerning infringement causes of action were analysed. The remainder of this thesis now moves away from infringement causes of action and considers other elements of patent infringement law. This chapter considers an exemption to patent infringement.

When infringement by exploitation is decided by a court in Australia, no recourse is made to the mental state of the alleged infringer.<sup>2</sup> Patent infringement is a strict liability offence. However, a court has a discretion to refuse damages or an order for an account of profits if the infringer was not aware, and had no reason to believe that a patent for the invention existed. This mechanism is known as innocent infringement. It is not applicable to the granting of injunctions.

Section 123 of the *Patents Act 1990* (Cth) (the '*Patents Act*') contains Australia's current provisions on innocent infringement. Section 123(1) provides that, if a court is satisfied that at the time of infringement an infringer was not aware, and had no reason to believe, that a patent for the invention existed, then the court may refuse to award damages or an account of profits. Section 123(2) provides that if patented products are 'marked so as to indicate that they are patented in Australia', and the products were sold or used in Australia 'to a substantial extent' before the date of the infringement, then the infringer is taken to be aware of the patent unless the contrary is established. The process of marking a product with patent related information is known as 'patent marking'. This chapter is concerned with the satisfaction of the patent marking requirement.

Since 1903, federal Australian patent law has included a provision dealing with innocent infringement.<sup>3</sup> Yet in nearly 110 years, such provisions have received little academic, legislative or judicial attention.<sup>4</sup> Innocent infringement under the *Patents Act 1903* (Cth) was not subject to judicial interpretation until *Philips v Myer Emporium Ltd* in 1928.<sup>5</sup> In that case, Irvine CJ criticised the provision, labelling it as 'imperfectly drafted, and almost unintelligible'.<sup>6</sup> This led to the provision being re-written in the *Patents Act 1952* (Cth).<sup>7</sup> The new provision was based on the British equivalent, which had been introduced in 1907.<sup>8</sup> Since 1952, innocent infringement in Australian

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<sup>2</sup> *Patents Act 1990* (Cth) ss 13, 120; *M'Lean v Kettle* (1883) 9 VLR (E) 145, 147–8 (Molesworth J); *Proctor v Bennis* (1887) 4 RPC 333, 346 (Bristowe VC), 356–7 (Bowen LJ); *Stead v Anderson* (1846) 136 ER 724, 736 (Wilde CJ); see also *Minnesota Mining & Manufacturing Co v Beiersdorf* (1980) 144 CLR 253, 271–87 (Aickin J; Barwick CJ, Stephen, Mason and Wilson JJ agreeing); *Populin v HB Nominees Pty Ltd* (1982) 56 FLR 37, 41–47 (Bowen CJ, Deane and Elliott JJ).

<sup>3</sup> *Patents Act 1903* (Cth) s 125.

<sup>4</sup> Colin Bodkin, Thomas Reuters, *Patent Law in Australia – Annotated Patents Act 1990* (Cth) (at September 2015) [PA 123.80].

<sup>5</sup> *Philips v Myer Emporium Ltd* (1928) 34 ALR 76, 77.

<sup>6</sup> *Ibid* 77.

<sup>7</sup> *Patents Act 1952* (Cth) s 124.

<sup>8</sup> *Patents Act 1907*, 7 Edw 7, c 29, s 33; *Report of the Committee Appointed by the Attorney-General of the Commonwealth to Consider What Alterations are Desirable in the Patent Law of the Commonwealth*, House of Representatives (1952) 41.

patent law has been the subject of a judicial opinion only once, and relatively recently in 2007.<sup>9</sup> An argument could be made that the small amount of litigation and commentary indicates that the provision is working well. However, from the economic-based patent perspective discussed in this chapter, cracks in the operation of the provision appear.

In Professors James Bessen and Michael Meurer's book, *Patent Failure*,<sup>10</sup> the authors argue that patent law has failed to require patentees to notify and articulate the boundaries of their rights in technology, which therefore disrupts the operation of patents as incentives for economic growth. Bessen and Meurer build their 'notice failure' thesis on four arguments:

- (1) patent claim language is vague and unpredictable;<sup>11</sup>
- (2) patent claim laws allow technology to be claimed that is not adequately disclosed;<sup>12</sup>
- (3) some patent claim information is not readily available;<sup>13</sup> and
- (4) the large numbers of patents and fragmentation of patent rights in technology, otherwise known as patent thickets, makes identifying technology already invented difficult.<sup>14</sup>

Bessen and Meurer use these arguments to demonstrate how, in many instances, patents have not operated as well demarcated pieces of property, efficiently allocating resources,<sup>15</sup> but as a 'tax' on innovation causing inefficiencies. Two particular types of inefficiencies the authors focus upon are: increased transaction costs in the form of search and information costs;<sup>16</sup> and litigation. Both, they argue, could be avoided if rights in technology are unambiguous.<sup>17</sup> The focus of this chapter is on Bessen and Meurer's third argument: that patents fail to fulfil their economic role when information about the breadth of the property rights claimed cannot be readily accessed.<sup>18</sup> In *Patent Failure*, Bessen and Meurer's argument focuses on the ability, or strategy, of patentees to hide claims during the application process in the US.<sup>19</sup> This chapter extends that reasoning to innocent infringement and patent marking. In short, the argument is that opaque patent rights created by inadequate marking is contrary to contemporary patent theory, causing unnecessary transaction costs and information asymmetries.

<sup>9</sup> *Unilin Beeher BV v Huili Building Materials Pty Ltd (No 2)* (2007) 74 IPR 345.

<sup>10</sup> James Bessen and Michael J Meurer, *Patent Failure* (Princeton University Press, 2008) ch 1.

<sup>11</sup> *Ibid* 54–62.

<sup>12</sup> *Ibid* 64–8.

<sup>13</sup> *Ibid* 62–3.

<sup>14</sup> *Ibid* 68–72.

<sup>15</sup> *Ibid* 47–52.

<sup>16</sup> *Ibid* 10–1, 50, 69–71. Although it should be noted Bessen and Meurer do not use the term 'transaction costs' to describe additional or increased search or information costs. However, Carl J Dahlman describes them this way in his seminal work, 'The problem of externality' (1979) 22 *Journal of Law and Economics* 141, 148.

<sup>17</sup> *Ibid* ch 2. Bessen and Meurer support their arguments with a survey of empirical evidence on tangible and intellectual property. They show that unlike tangible property in which there is little confusion about boundaries and has clear economic payoffs, no similar economic payoff has been observed for patent rights, see chs 4–6.

<sup>18</sup> *Ibid* 62–3.

<sup>19</sup> *Ibid*.

Part 1 of this chapter begins by outlining the concept and rationale for innocent infringement and patent marking in the context of contemporary patent law theory. In a later article, Meurer, together with Peter Menell, briefly address the issue of patent marking, but not in detail and not in reference to marking with patent numbers.<sup>20</sup> US and UK patent law specifies that for notice to be effected through patent marking, a patent number must be included.<sup>21</sup> One of the arguments advanced in this chapter is that patent marking with patent numbers reduces transaction costs and therefore increases the overall efficiency of the patent regime.<sup>22</sup> However, Australian legislation does not specify that a patent number must be included when patent marking.

The only post-1952 Australian judicial opinion on innocent infringement is that of Allsop J in *Unilin Beeher BV v Huili Building Materials Pty Ltd (No 2)*, (*'Unilin'*),<sup>23</sup> in which he considered it in obiter. This chapter offers a more expansive interpretation of s 123 of the *Patents Act*, with particular focus on identifying what marks are sufficient to discharge notice requirements, including whether patent numbers are required by implication. It becomes clear from this statutory interpretation that patent numbers are not required when patent marking in Australia. The need for reform of innocent infringement is then considered with reference to the transaction costs that can be observed when patent numbers are not required. It is argued that s 123 should be amended: patent numbers should be required to satisfy patent marking requirements. Moreover, this should be achieved by a mechanism similar to that used in the UK.

Part 2 of this chapter addresses 'virtual patent marking'. Virtual patent marking refers to the practice of marking a patented product with the term 'patented', 'together with an address of a posting on the Internet'.<sup>24</sup> In the US, patent holders have recently been afforded the option to mark patented products using virtual patent marks.<sup>25</sup> This is in addition to retaining the non-virtual, or 'traditional', way of marking (with the term 'patented' and a patent number).<sup>26</sup> In principle, the case for implementing virtual marking in Australia is quite straight forward. Virtual marking can enhance the notice function of patent marking, while at the same time generally lowering its cost, and simplifying international trade. However, before instituting virtual marking amendments in Australia, legislators should consider additional aspects of virtual marking, and traditional marking, to create the most efficient innocent infringement law.

<sup>20</sup> Nor have any other authors. For a brief review of applications of 'notice problems', see, Peter S Menell and Michael J Meurer, 'Notice Failure and Notice Externalities' (2013) 5 *Journal of Legal Analysis* 1, 4–5, 37–8.

<sup>21</sup> *Patents Act 1977* (UK) c 37, s 62(1); 35 USC § 287(a).

<sup>22</sup> By 'patent number' the author is referring to any number associated with a patent that can uniquely identify it and can be easily used to search websites to locate the patent.

<sup>23</sup> *Unilin Beeher BV v Huili Building Materials Pty Ltd (No 2)* (2007) 74 IPR 345; see also *Woodbridge Foam Corp v AFCA Automotive Foam Components Pty Ltd* (2002) 58 IPR 56, 59–60 where it was briefly assessed for whether material facts had been plead in support of the 'defence'.

<sup>24</sup> 35 USC § 287(a).

<sup>25</sup> Ibid as amended by *America Invents Act of 2011*, Pub L No 112-29, § 16.

<sup>26</sup> Ibid.



Before exploring the substantive arguments in this chapter it is necessary to briefly outline other issues that are relevant but beyond the scope of this work. First, under s 123(1), notice of patent rights can be established without a market product and therefore without patent marking. Notice of patent rights in scenarios without a market product raises a myriad of additional issues that have been outlined by Bessen and Meurer, and Meurer and Menell.<sup>27</sup> In effect, the issue of patent marking a market product, as addressed here, is a relatively distinct ancillary issue. However, as explored in this chapter, these scenarios do overlap. Since the focus of this chapter is on patent marking of market products, it will be assumed that the law regarding the discharge of notice without a market product is, more or less, consistent with patent law theory, but still susceptible to reform. Meurer and Menell do discuss a broad range policy ideas and considerations for notice in circumstances of no market products, but make no specific recommendations.<sup>28</sup>

Second, this chapter builds on the fact that the potential loss of monetary remedies when a product is not marked as patented, operates to incentivise patent marking. However, as innocent infringement does not affect the award of injunctions, the incentive may not always operate because some patent holders only require injunctions. Commentators have begun to investigate the role of notice in limiting the award of injunctions.<sup>29</sup> However, the complex nature of injunctions, not least their equitable basis,<sup>30</sup> means that many of the arguments required to evaluate this issue are not addressed here.

Finally, the arguments in this chapter also have further implications for various aspects of patent practice, particularly patent marking obligations for licensees and licensors. Important questions include: when will licensees be required to mark with a licensor's patent numbers; and in what circumstances will licensees be liable for financial relief a licensor is denied because the licensee failed to mark properly? While these considerations have been addressed in the US,<sup>31</sup> their resolution in Australia is not immediately clear. Accordingly, further work may be needed to ensure innocent infringement law is achieving desired outcomes.

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<sup>27</sup> See, Peter S Menell and Michael J Meurer, 'Notice Failure and Notice Externalities' (2013) 5 *Journal of Legal Analysis* 1; James Bessen and Michael J Meurer, *Patent Failure* (Princeton University Press, 2008) chs 1–3, 10.

<sup>28</sup> *Ibid* 29–50.

<sup>29</sup> Herbert Hovenkamp, 'Response Notice and Patent Remedies' (2011) 88 *Texas Law Review* 221, 224–31; Peter S Menell and Michael J Meurer, 'Notice Failure and Notice Externalities' (2013) 5 *Journal of Legal Analysis* 1, 45–6.

<sup>30</sup> Relevantly, in considering whether to award an injunction various factors are taken into account including, laches (*Cabot Corp v Minnesota Mining & Mfg Ltd* (1987) 11 NSWLR 697, 709–711), dishonesty, unconscionability (*Kalamazoo (Aust) Pty Ltd v Compact Business Systems Pty Ltd* (1985) 5 IPR 213, 241; *Turner v General Motors (Australia) Pty Ltd* (1929) 42 CLR 352, 366 (per Isaccs J), 369–70 (per Dixon J)), and undue hardship that will be suffered defendants (*Samsung Electronics Co Ltd v Apple Inc* (2011) 286 ALR 257, 273–7).

<sup>31</sup> *Amsted Industries Inc v Buckeye Steel Casing*, 23 F 3d 374 (Fed Cir, 1994); Steve C Sereboff, 'New Requirements in Patent Marking and Notice' (1994) 76 *Journal of the Patent and Trademark Office Society* 793.

## I. Traditional Marking

### A. The Concept and Rationale of Innocent Infringement

The leading contemporary theory underpinning the existence of the patent system is that patents encourage innovation by providing an exclusive property right that allows a party to generate profits otherwise unobtainable without a patent.<sup>32</sup> Although the profits generated are supranormal, they are, in theory, offset by the cost that would otherwise be encountered if the invention were not developed under the patent system, or not developed at all.<sup>33</sup> Broadly speaking this is an economic utilitarian theory, designed to increase social and economic welfare.<sup>34</sup>

One of the challenges with this utilitarian justification for patent rights is that they exist in the background of a market economy, which relies on free competition.<sup>35</sup> Generally speaking, free competition leads to greater market efficiency and therefore increased social welfare.<sup>36</sup> Consequently, through a meta-economic lens, it is logical that patent infringement remedies should be limited to an injunction when an infringer is not aware, or has no reason to be aware of a patent, because there is a default state in the economy that market products are open to competition.<sup>37</sup> Patent marking signals a deviation from the default of free competition. It indicates to a competitor, or potential competitor,<sup>38</sup> that a patent right is attached to a product. Without patent marking, or any other appropriate type of notice, competitors should be allowed to assume that if they are infringing a patent they are doing so innocently and will therefore not be held liable for damages or an account of profits.

This type of reasoning is analogous to that of the US Supreme Court in *Bonito Boats Inc v Thunder Craft Boats Inc*.<sup>39</sup> In that case, when discussing US intellectual property marking provisions, O'Connor J, writing for a unanimous Court stated:

The availability of damages in an infringement action is made contingent upon affixing a notice of patent to the protected article. The notice requirement is designed 'for the information of the public,' and provides a ready means of discerning the status of the intellectual property embodied in an article

<sup>32</sup> William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 13.

<sup>33</sup> Ibid 20. Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 11–8.

<sup>34</sup> William Fisher, 'Theories of Intellectual Property' in Stephen Munzer (ed), *New Essays in the Legal and Political Theory of Property* (Cambridge University Press, 2001) 168, 169.

<sup>35</sup> By free competition, the author is referring to markets that anyone can enter and are not regulated.

<sup>36</sup> Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (Australian Government Publishing Service, Canberra, 1984) 11–18; Economic Planning Advisory Council, 'Promoting Competition in Australia' (Australian Government Publishing Service, Canberra, 1989) 5–6; Philip L Williams, 'Why regulate for competition?' in Michael James (ed), *Regulating for Competition?* (The Centre for Independent Studies Ltd, 1989) 13, 13–6.

<sup>37</sup> William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 23.

<sup>38</sup> For ease of reference the rest of this chapter will refer to a competitor and a potential competitor as simply a competitor.

<sup>39</sup> *Bonito Boats Inc v Thunder Craft Boats Inc*, 489 US 141 (1989).

of manufacture or design. The public may rely upon the lack of notice in exploiting shapes and designs accessible to all.<sup>40</sup>

Connected to the economic utilitarian arguments for patent law is the justification that patent law encourages disclosure of new technology.<sup>41</sup> One of the costs that may be encountered in an economy without a patent regime is that an explanation of how an invention operates is not provided.<sup>42</sup> The exchange of an explanation of how a new invention works for exclusive rights in the technology is commonly known as ‘disclosure theory’.<sup>43</sup> Patent marking has the capacity to enhance disclosure. If marking serves as a signpost of a detailed explanation of a technological advance that supports a market product, then it allows researchers and competitors to directly understand what has been achieved. Moreover, unlike trawling patent or scientific literature in a bid to obtain technological insight, patent marking serves as a physical embodiment of patent claims – more so than any preferred embodiment in patent specifications.

To further explore the rationale for innocent infringement in patent law, it is interesting to compare the notice function in copyright. Copyright material typically carries a message about what is protected and for how long. For example, books, scripts, music, and art work usually have a publication/production date and it is implicit that the expression in such works is protected. As a result, there is no specific need to pinpoint any right that protects any given copyright work to put potential infringers on notice that such rights exist (although such notice is often included). This is unlike the situation with regard to patents, where being told a product is protected by a patent does not give notice to a third party as to what aspect of the invention is protected, nor how long for.

### B. Interpretation of s 123

The patent in *Unilin* claimed a type of interlocking floor panel, and manufacturing thereof.<sup>44</sup> Pursuant to the patent, infringement proceedings were initiated against six parties that were involved in importing and selling floor panels not authorised by the patentee.<sup>45</sup> All six respondents were found liable for infringement.<sup>46</sup> The case primarily addressed the quantum of profits to be accounted for.<sup>47</sup> On this point, the fifth respondent raised innocent infringement in its pleading but settled prior to the trial.<sup>48</sup> Although the remaining respondents did not formally plead innocent infringement, Allsop J addressed the issue because it had been mentioned in response to a letter of

<sup>40</sup> Ibid 161–2 (citations omitted); see also, *Nike Inc v Wal-Mart Stores Inc*, 138 F 3d 1437, 1443 (Fed Cir, 1998).

<sup>41</sup> William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 326–33; Mark Lemley, ‘The Myth of the Sole Inventor’ (2012) 110 *Michigan Law Review* 709, 745.

<sup>42</sup> Ibid.

<sup>43</sup> Mark Lemley, ‘The Myth of the Sole Inventor’ (2012) 110 *Michigan Law Review* 709, 711; Kamal Idris, *Intellectual Property: A Power Tool for Economic Growth* (World Intellectual Property Organisation, 2004) 24.

<sup>44</sup> *Unilin Beeher BV v Huili Building Materials Pty Ltd (No 2)* (2007) 74 IPR 345, 361.

<sup>45</sup> Ibid 354–5.

<sup>46</sup> Ibid.

<sup>47</sup> Ibid 345–6.

<sup>48</sup> Ibid 361.

demand.<sup>49</sup> In examining, innocent infringement, his Honour identified evidence that showed the applicant had significant sales and that the packaging on the applicant's product had been labelled with patent related marks, including: 'patented technology', European and US patent numbers, and an Australian patent number.<sup>50</sup> However, Allsop J did not discuss how the different marks discharged notice requirements under s 123(1) and (2). Instead, based on the totality of evidence, his Honour concluded the respondents were aware of the applicants' patent during the course of infringement.<sup>51</sup>

A thorough interpretation of s 123 is offered below using the markings from *Unilin* as guidance. Specifically, it evaluates whether the standalone phrase 'patented technology',<sup>52</sup> or the term 'patented' when followed by a foreign or Australian patent number is sufficient to satisfy the marking requirements in s 123(1) or (2).<sup>53</sup> In addition, due to the drafting of s 123(2), the question of whether the phrase 'patented in Australia' is sufficient is also considered. The core elements and relevant tests from s 123 have been set out in the introduction to this chapter. However, to properly interpret the section, it is necessary to have reference to the full text:<sup>54</sup>

(1) A court may refuse to award damages, or to make an order for an account of profits, in respect of an infringement of a patent if the defendant satisfies the court that, at the date of the infringement, the defendant was not aware, and had no reason to believe, that a patent for the invention existed.

(2) If patented products, marked so as to indicate that they are patented in Australia, were sold or used in the patent area to a substantial extent before the date of the infringement, the defendant is to be taken to have been aware of the existence of the patent unless the contrary is established.

(3) Nothing in this section affects a court's power to grant relief by way of an injunction.<sup>55</sup>

Section 123(2) is dealt with first because it specifically addresses patent marking. Before analysing each of the four marks at issue, though,<sup>56</sup> it is necessary to note two contingent elements of the section. First, in *Unilin* no issue was raised with respect to marking the packaging of products. This is notable because this form of marking is not specifically provided for in the *Patents Act*, and therefore it could be questioned whether marking a product's packaging is sufficient to discharge notice

<sup>49</sup> Ibid 368.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid 369.

<sup>52</sup> For most purposes the phrase 'patented technology' can probably be considered equivalent to 'patented'.

<sup>53</sup> The standalone word 'patented' is not considered in this chapter because it is considered synonymous with the tautologous phrase 'patented technology'.

<sup>54</sup> As the High Court stated in *Alcan (NT) Alumina Pty Ltd v Commissioner of Territory Revenue* (2009) 239 CLR 27, 46–7, '[t]his Court has stated on many occasions that the task of statutory construction must begin with a consideration of the text itself'.

<sup>55</sup> *Patents Act 1990* (Cth). It is also worth noting that Bodkin has mentioned that a literal reading of s 123 may mean that any infringement of a patent application is innocent. However, as Bodkin mentions, this would be inconsistent with s 57(1) of the *Patents Act 1990* (Cth). This chapter will proceed on the basis that s 123 applies to both patent applications and granted patents (see Colin Bodkin, Thompson Reuters, *Patent Law in Australia – Annotated Patents Act 1990* (Cth) (at September 2015) [PA 123.100].

<sup>56</sup> Namely 'patented technology', the European patent number, the US patent number and the Australian patent number.

requirements. However, marking a product's packaging probably comes within the definition of 'product' in s 123(2). The rationale for this conclusion is that it would be impractical if marking packaging and associated information distributed with products could not effect notice. Indeed, in some circumstances marking the actual product could affect its functionality, for example, toothpaste.<sup>57</sup> Therefore, the remainder of this chapter will assume that marking packaging is sufficient to effect notice. Second, for patent marking requirements to be discharged under s 123(2), the marked products must be 'sold or used in the patent area to a substantial extent before the date of infringement'.<sup>58</sup> While this could be a contentious question of fact in litigation, this chapter is concerned with products that are widely used or sold, and will proceed assuming at least one of these requirements are satisfied.

As a starting point, it is suggested that marking a product with either 'patented technology' or 'patented' followed by a foreign patent number, do not discharge notice requirements under s 123(2). This outcome is arrived at because the section explicitly states, '*marked so as to indicate it is patented in Australia*',<sup>59</sup> but 'indicate' is not defined in the *Patents Act*. The Macquarie Dictionary definition of 'indicate' is: (1) 'to be a sign of; betoken; imply'; (2) 'to point out or point to; direct attention to'; (3) 'to show, or make known'; (4) 'to state or express, especially briefly or in a general way'.<sup>60</sup> Analysing each of these definitions, it is quite clear that the marks 'patented technology' or 'patented' followed by a foreign patent number, are not signs of an Australian patent, nor do they 'point out', 'direct attention to', 'show, or make it known' that a relevant Australian patent exists. While the marks indicate that a product is patented, there is no link to an Australian patent. The phrase could refer to patent protection anywhere in the world.

There are two remaining arguments that the marks in question could establish notice under s 123(2). Both rely on arguing that an Australian patent is 'indicated' because it can be 'implied' from them. First, from the circumstances of a product being sold in Australia, use of the marks 'implies' an Australian patent exists. However, this argument appears to fall outside the test prescribed by s 123(2). The required test is whether the mark indicates, or as the definition of 'indicate' suggests, whether the *mark* implies that the product is patented in Australia, not whether the circumstances do. The second argument is if it was generally acknowledged that a patent in another country implies that a patent existed in Australia, then it could be argued that a foreign mark indicates an Australian patent. However, no such relationships have been shown in patent literature, and for the jurisdictions mentioned in *Unilin*, data from the World Intellectual Property Organisation does not support such a contention. In 2011 the Australian Patent Office received 25,526 patent

<sup>57</sup> See also, 35 USC § 287(a); *Sessions v Romadka*, 145 US 29, 49–50 (1892).

<sup>58</sup> *Patents Act 1990* (Cth) s 123(2).

<sup>59</sup> *Ibid* (emphasis added).

<sup>60</sup> *Macquarie Concise Dictionary* (Macquarie Dictionary Publishers, Online 6<sup>th</sup> ed, 2013).

applications.<sup>61</sup> By contrast, the United States Patent and Trademark Office (USPTO) received 503,582 and the European Patent Office, 142,793.<sup>62</sup> In terms of patents in force by domestic office, as of 2011: Australia had 105,463, the US 2,113,626, Germany 527,917 and the UK 445,380.<sup>63</sup> Some jurisdictions have laws that influence the number of patents that are lodged, for example, unity of invention in the US,<sup>64</sup> or methods of medical treatment in Europe.<sup>65</sup> But it is unlikely such laws compensate for such dramatic differences. There are significantly more patents in the US and Europe compared to Australia. Consequently, it could not be implied that an Australian patent exists based on a US or European patent.

In reference to the other marks, there is little doubt that 'patented in Australia' satisfies the test of 'marked so as to indicate it is patented in Australia'. It seems logical too that if the word 'patented' is followed by an Australian patent number, then this would be sufficient because the number 'signifies' an Australian patent. A consequence of the phrase 'patented in Australia' satisfying the criterion for patent marking under s 123(2) is that there is no requirement to mark with a patent number.

Turning to address whether the four marks contemplated satisfy s 123(1), the test is 'if the defendant ... had no reason to believe a patent for the invention existed'. A preliminary issue in interpreting this provision is whether the test is subjective or objective, that is, whether 'reason to believe' is evaluated from the subjective perspective of the defendant, or a 'reasonable person' in the position of the defendant. The UK test, on which the Australian provision is modelled, states, if the 'defendant ... at the date of the infringement ... was not aware, and had no reasonable grounds for supposing, that the patent existed'.<sup>66</sup> The UK case of *Lancer Boss Ltd v Henley Forklift Co Ltd*,<sup>67</sup> interpreted the use of the term 'reasonable' to imply an objective test.<sup>68</sup> Looking to analogous provisions in the *Patents Act*, the phrase 'reason to believe' in s 117(2)(b) has been interpreted to impart an objective test.<sup>69</sup> Indeed, the presence of a 'reason' suggests the search is for something external to the infringer, which can be objectively identified. Since s 123 concerns notification of people of patent rights, it seems sensible that it is an objective test. This would promote efficient passage of information about patent rights, and prohibit people from burying their heads in the sand and

<sup>61</sup> World Intellectual Property Office, *World Intellectual Property Indicators* (WIPO Economic and Statistics Series, 2012) 49.

<sup>62</sup> *Ibid.*

<sup>63</sup> *Ibid* 79. Results from Germany and the UK were used because they are the European countries with the most patents in force.

<sup>64</sup> 35 USC § 121.

<sup>65</sup> *European Patent Convention*, art 53(c).

<sup>66</sup> *Patents Act 1977* (UK) c 37, s 62(1).

<sup>67</sup> *Lancer Box Ltd v Henley Forklift Co Ltd* [1974] FSR 14.

<sup>68</sup> *Ibid* [27] affd *Texas Iron Works Inc's Patent* [2000] RPC 207, 235.

<sup>69</sup> *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd* (2013) 296 ALR 50, 59 (Emmett J), 73–4 (Bennet J), 90 (Greenwood J); *Collins v Northern Territory* (2007) 161 FCR 549, 573 (French J); see also Chapter 2 pt II B; Chapter 4 pt II A. It has also been interpreted to be subjectively satisfied if evidence suggests that the person in question knew of the relevant facts, *Generic Health Pty Ltd v Otsuka Pharmaceutical Co Ltd* (2013) 296 ALR 50, 73–4 (Bennet J); see also Chapter 5 pt III A.

claiming subjective ignorance. As a result, this chapter will proceed assuming the test in s 123(1) is objective.

On this interpretation of s 123(1), it seems clear that the phrases ‘patented in Australia’, and ‘patented’ followed by an Australian patent number, would give reason to believe that a patent exists for the invention. More contentious enquiries are whether products marked with the phrases ‘patented technology’, or ‘patented’ followed by a foreign patent number, provides a reason to believe a patent for the invention exists. However, before analysing these individual marks, there is a contingent issue of whether notice under s 123(1) can only be effected by notice of an Australian patent or any patent in the world. The text in s 123(1) refers to whether ‘a patent ... existed’,<sup>70</sup> not whether an Australian patent existed. A literal reading of these words suggests that marking a product with the phrase ‘patented technology’, or ‘patented’ followed by any patent number, including a foreign patent number, will effect notice. However, since the dictionary in the *Patents Act* defines ‘patent’ to mean ‘a standard or innovation patent’ – which are, of course, references to Australian patents - notice under s 123(1) is logically limited to notice of an Australian patent. It is therefore relevant to ask whether the term ‘patented technology’, or the term ‘patented’ followed by a foreign filing number, can give an objective reason to believe an Australian patent exists.

As a general rule, there appear to be strong arguments that either mark could give an infringer reason to believe that an Australian patent does exist. In the case of a product marked ‘patented technology’, this is based on the simple reasoning that if it is sold or used in Australia then a person may believe a patent exists because it is marked ‘patented’ and is sold within Australia. Similarly, the term ‘patented’ followed by a foreign patent number on the same product sold in Australia would provide a reason to believe an Australian patent exists because it is widely known that patent protection is obtained in multiple jurisdictions, and it makes sense that if the product is sold in Australia, there is similar protection to give the patent holder monopoly profits. Although these patent marks may generally convey a reason to believe a patent for an invention exists, the test would include any other relevant facts, and such facts could conceivably indicate a patent does not exist. For example, if a product looks like it is 50 years old then there may be no reason to believe that a patent exists. Or, if a product has existed for 10 years in another country, is generally not available in Australia, and is marked ‘patented technology’ or ‘patented’ followed by a foreign patent number, then there may also be no reason to believe an Australian patent exists.

Another consideration in the interpretation of s 123 is its relationship with the false patent marking provision in s 178(2) of the *Patents Act*. This provision is examined in detail in the next chapter of this thesis, but it is necessary to briefly address it here due to its relevance to marking with patent

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<sup>70</sup> *Patents Act 1990* (Cth) s 123(1).

numbers.<sup>71</sup> Section 178(2) specifies, '[a] person must not falsely represent that an article sold by him or her is patented in Australia, or is the subject of an application for a patent in Australia.'<sup>72</sup> Section 178(3) defines the terms 'patent', 'patented', 'provisional patent' and any other terms implying a patent has been obtained in Australia to constitute a representation that a patent has been obtained in Australia. This means that if a product is marked with one of the terms 'patented technology', 'patented in Australia', or 'patented' followed by an Australian patent number, and there is, in fact, no relevant Australian patent then this section is probably contravened.

On this basis, s 178(2) could operate as a restraint on patent marking in Australia, particularly the term 'patented technology'. If exporters want to use this as a generic term on products exported to countries both with and without patent protection, they risk prosecution for false patent marking. In Australia, this could lead to a \$10,200 fine.<sup>73</sup> However, in reality the risk of prosecution for false patent marking is low.<sup>74</sup> Since the equivalent of s 178(2) of the *Patents Act* was incorporated into Australian patent law in the *Patents Act 1952* (Cth),<sup>75</sup> there have been no recorded prosecutions for false patent marking, and communications with IP Australia indicate permission has never been sought to begin prosecution under the provision.<sup>76</sup> As a result, the take home messages from this discussion, then, is that although s 178(2) has the capacity to prohibit some false marks, without having been used, it offers questionable utility. Similarly, s 178(2) will not operate to require patent marks include patent numbers.

On the whole, the interpretation above of s 123(1) and (2) draws some interesting conclusions. Subject to context pointing away from patent protection in Australia, all four of the patent marks in *Unilin* are likely to give rise to notice under s 123(1). On the other hand, under s 123(2), the provision specifically designed for patent marking, only the marks 'patented in Australia' or 'patented' followed by an Australian patent number are sufficient to establish notice. On this basis, s 123(1) appears to be a much broader test. Moreover, whilst s 123(2) does present an infringer with the opportunity to rebut the presumption of notice under the subsection, an infringer is unlikely to garner innocent infringement protection in these circumstances for two reasons. First, if patent marking is effected, for an infringer to successfully plead innocent infringement they must prove that they were unaware a patent existed for the product – a difficult task given they have been found to infringe a market product that is sold or used to a substantial extent. Second, even if they do rebut the presumption they must prove that they had no reason to believe a patent for the product existed

<sup>71</sup> See generally, Chapter 7.

<sup>72</sup> *Patents Act 1990* (Cth) s 178(2).

<sup>73</sup> See, Chapter 7 pt II A; see also, Johnathon E Liddicoat and Dianne Nicol, 'Re-Evaluating False Patent Marking in Australia' (2013) 22 *Journal of Law, Information and Science* 128, 145–6.

<sup>74</sup> See *ibid* 146. As described in *ibid* 147–51 litigation could also be brought under the *Competition and Consumer Act 2010* (Cth) but this will not mandate patent numbers must be used when marking either.

<sup>75</sup> *Patents Act 1952* (Cth) s 174.

<sup>76</sup> Email from Nathan Madsen, Senior Examiner of Patents, IP Australia, to Johnathon Liddicoat, 30 April 2013.



under s 123(1). As a side note, this breadth may explain why the provision has not been litigated much, given that most marks would appear to discharge notice requirements.

### C. Transaction Costs Related to the Current Operation of Innocent Infringement, and How s 123 Should Be Amended

Since s 123 is unlikely to require a product to be marked with a patent number to effect notice, it follows that although a person may be deemed to have notice of a patent, they do not know which patent, or what the limits of the patent rights are – a clear case of an information asymmetry. There are also various reasons why patentees may not want to mark products with a patent number. For example, patentees would have to mark products in each jurisdiction with different patent numbers,<sup>77</sup> which immediately informs competitors what protection applies to their products, and there would be an aesthetic effect on the presentation and marketing of the product. As a result, unless patentees have an incentive to mark with a patent number, this suggests that in many situations they are unlikely to be used.

Since, as established above, patent marking indicates a deviation from the default of free competition by indicating a property right is attached to an item, but competition and information is needed to create the most efficient market, then to the greatest reasonable extent, marking should delimit patent rights protecting a product. Clearly, printing the entire patent specification on a product is absurd,<sup>78</sup> but marking with a patent number may be a fair compromise. This idea is explored in various scenarios below.

It is risky for a competitor to operate without knowing the limits of patent rights protecting a market product because there is a chance an infringement action could be brought against them.<sup>79</sup> In general, for a party to locate patent information without a domestic patent number, they must either hire a patent attorney, contact the manufacturer and ask for patent details (which the manufacturer is under no obligation to provide), or invest a significant amount of time searching a database on the Internet. Admittedly, Australian patent specifications are available for free on IP Australia's *AusPat* website, as well as various other databases.<sup>80</sup> By searching a database on the Internet there is a chance that a competitor will find the relevant patent, but there is also a

<sup>77</sup> This may be an expensive task, for example in, *Pequignot v Solo Cup*, 646 F Supp 2d 790, 793 it was estimated that it would cost over US\$500,000 to change engraving moulds.

<sup>78</sup> Although this idea is on its face absurd, the second half of this chapter discusses virtual marking. If the approach this chapter advocates is endorsed then the outcome would be that every product marked would, in effect, be marked with the entire patent specification.

<sup>79</sup> The author acknowledges that, regarding a foreign patent number, it is possible to use a website such as the European Patent Office's *Escapenet* <<http://www.escapenet.com>> to get an Australia patent number, which can then be used to search IP Australia's *Auspat* website <<http://www.ipaustralia.gov.au/auspat>> to retrieve patent information. However, the author considers this to be beyond the capacity of the average competitor without expending too many resources.

<sup>80</sup> *AusPat*, IP Australia <[www.ipaustralia.gov.au/auspat](http://www.ipaustralia.gov.au/auspat)>; see also n 78.

significant chance they will not – patent searching is an often overlooked professional skill.<sup>81</sup> Hiring a patent attorney will probably result in identifying all the relevant patents applicable to a product, however, highlighting the difficulty in patent searching, this is not certain either. Key patents are sometimes missed in such processes. Indeed, a crucial fact in the recent US Supreme Court case of *Global-Tech Appliances Inc v SEB SA*,<sup>82</sup> was that patent attorneys failed to identify the patent infringed.<sup>83</sup> Moreover, the financial cost of obtaining professional advice can be significant and for some competitors prohibitive, often costing thousands of dollars.<sup>84</sup>

In the alternative that a patent number is provided, anyone can insert the number into *AusPat* and retrieve: patent specifications, bibliographic data, e-register, e-dossier, lifecycle details, fee/publication history, ownership details, and any details of oppositions, disputes and amendments.<sup>85</sup> Moreover, with a patent number, a competitor can easily discover whether a patent has expired, or whether a patent relates to the whole product, a method to create a product, a specific use of a product, or an aspect of a product's functionality.

Since searching the *AusPat* database immediately reveals the status of a patent (that is, whether it is granted, lapsed etc), in some circumstances all that would be required for a competitor to 'work around the patent', or directly use the previously patent protected technology if the patent is no longer in force, is the patent number. This point, and others described above, can be illustrated using a hypothetical fact situation loosely based on the famous Australian case, *National Research Development Corp v Commissioner of Patents* ('NRDC').<sup>86</sup> This provides a good case study to illustrate the advantages of patent numbers, particularly to people unfamiliar with patent searching and prosecution.

In *NRDC* the High Court held that a new use for a known chemical as an herbicide was patentable subject matter.<sup>87</sup> As the patent in *NRDC* was granted for a method to kill weeds, it is conceivable that a container for the herbicide could have 'patented in Australia' or something akin printed on it – a phrase likely to establish notice under s 123(1) and (2).<sup>88</sup> If an agronomist uses this chemical and discovers a method that allows the chemical to be used as a selective pesticide, the agronomist may want to exploit the invention – with or without patent protection. To exploit the invention without

<sup>81</sup> James Bessen and Michael J Meurer, *Patent Failure* (Princeton University Press, 2008) 48–51; See, Stanley P Kowalski, 'Freedom to Operate: The Preparations' in A Krattiger et al (eds), *Intellectual Property Management in Health and Agricultural Innovation: A Handbook of Best Practices* (Oxford and PIPRA, 2007) 1329; Peter S Menell and Michael J Meurer, *Notice Failure and Notice Externalities* (2013) 5 *Journal of Legal Analysis* 1, 2–6.

<sup>82</sup> *Global-Tech Appliances Inc v SEB SA*, 131 S Ct 2060 (2011).

<sup>83</sup> *Ibid* 2060.

<sup>84</sup> A recent paper estimated the cost of an FTO for 'a single patent' to be around US\$20,000 see, McKernan et al, 'DREAMing of a patent-free human genome for clinical sequencing' (2013) 31 *Nature Biotechnology* 884, 884.

<sup>85</sup> *AusPat*, IP Australia <<http://pericles.ipaustralia.gov.au/ols/auspat/>>.

<sup>86</sup> *National Research Development Corp v Commissioner of Patents* (1959) 102 CLR 252.

<sup>87</sup> *Ibid* 261, 279.

<sup>88</sup> See part I A.

the risk of patent infringement, the agronomist may have to try to negotiate a licence or work around the patent. This would be a cost intensive process due to the difficulties in identifying the patent. There is a chance the agronomist may abandon the idea. On the other hand, a patent number would make this significantly easier and probably allow the agronomist to see the patent only covers the use of the chemical as an herbicide.<sup>89</sup>

A general argument against requiring patent numbers when patent marking is that since many patents are written in a language that is difficult to understand, there is little utility in making them more accessible. However, if patents are going to be understood, one of the classes of people who will understand them is competitors since they usually operate in the same field. Moreover, although specifics of an invention may be obscured in a patent to everyone but a patent attorney practising in the area, recognising whether a patent pertains to the whole product, an element of the product, a specific use of the product, or a method, is significantly easier and commercially valuable.

In the event that the agronomist wanted to obtain patent protection for use of the chemical as a pesticide, then, during the application and examination processes, both the agronomist's patent attorney and the relevant examiner would likely identify the *NRDC* patent. In this scenario it is possible the existing patent would not prevent the granting of a new patent for want of novelty or inventive step. However, in an alternate reality where the *NRDC* patent did prevent the agronomist from claiming the chemical for use as a pesticide, it would have been more simple and efficient for the agronomist to look up the patent using the patent number and see that use as a pesticide was already claimed.

Beyond the patent marking scenarios already considered. It is also possible that a product is falsely marked as 'patented' and no patent actually exists.<sup>90</sup> This situation is also dealt with in more detail in the next chapter, however its relevance to innocent infringement is that if false patent marking is completed with a patent number then an interested party can resolve this issue quickly. But if the number is not available, they must resort to identifying the patent themselves or paying someone else to. All of which is quite confusing since they are looking for something that does not exist.

More broadly, it is necessary to acknowledge that much of the foregoing reasoning is implicitly built upon the idea of a lone, lay inventor; a misconception that perhaps many commentators and jurists share.<sup>91</sup> The reality is that many patents are paid for and owned or controlled by companies that pay

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<sup>89</sup> The author acknowledges that it may be beyond the average innovator to know of IP Australia's *AusPat* website <<http://www.ipaustralia.gov.au/auspat>> but in the author's experience, often inserting application numbers or serial numbers into Google retrieves the relevant patent. Moreover, conducting an internet search using search terms akin to 'search Australian patents' or 'Australia(n) patent(s)' often returns links to the *AusPat* database.

<sup>90</sup> See generally, Chapter 7; see also, Johnathon E Liddicoat and Dianne Nicol, 'Re-Evaluating False Patent Marking in Australia' (2013) 22 *Journal of Law, Information and Science* 128.

<sup>91</sup> See generally, Mark Lemley, 'The Myth of the Sole Inventor' (2012) 110 *Michigan Law Review* 709.

researchers to invent. The significance of this is that companies are likely to be more patent-savvy than lone inventors. Notably, companies often employ in-house IP managers to produce patent landscapes and freedom-to-operate analyses ('FTOs') before too much time and effort is invested in research and development.<sup>92</sup> Indeed, FTOs are often part of routine risk management processes associated with the development of new products. In such scenarios, as projects develop, external parties (patent attorney or law firms) are also likely to be contracted to perform more detailed FTOs before a patent application is filed, and often before too many resources are invested in commercialisation. Moreover, when potential research and development partners consider joining a project they will often undertake additional FTOs and landscaping. This means that patent marking in these circumstances may be redundant because patent searches will be repeated numerous times and any patents will have already been identified through this process.

While it is possible that patent marking may be redundant in some scenarios, as a general rule patent searching is expensive and may not be within the financial means of many inventors. This may be particularly problematic for backyard inventors, academics and cash-lean companies. Moreover, even if searching is affordable, it does not always occur. Indeed, in some industries it is common to ignore patents, whilst in others it is more common to undertake FTO analyses.<sup>93</sup> Regardless, patent numbers will still simplify searches and make FTOs easier. In addition, a range of other useful information is provided once a patent entry is accessed. For example, in addition to the information listed above, patent entries contain relevant patent classification codes, names of inventors, citing patents and cited patents and names of applicants. The patent classification codes allow searches to be conducted using codes that have been applied to key patents. Similarly, citation lists quite often include the most relevant patents without having to look any further, and like all other good literature searching, forms a means of research itself.

In other scenarios, where companies do not conduct FTOs and landscape analyses as a matter of course, they may still need to identify patent rights before they conduct certain activities. This may arise in circumstances of in-licensing, transferring technology, using a research tool or transitioning from basic experimental work to that which is commercially focused. In such situations a company may only need to identify the one or two patents that protect a product. In the author's experience, if the product has a patent number this takes about two minutes, but if the patent is not marked, two hours.

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<sup>92</sup> Tanya Bubela et al, 'Patent Landscaping for Life Sciences Innovation: Toward Consistent and Transparent Practices' (2012) 31 *Nature Biotechnology* 202.

<sup>93</sup> Michael Meurer, 'Patent Notice and Cumulative Innovation' in Geoffrey A Manne and Joshua D Wright (eds), *Competition Policy and Patent Law under Uncertainty* (Cambridge, 2011) 331, 332.

The analysis above demonstrates that although phrases such as ‘patented in Australia’ may be legally sufficient to give notice of patent rights to third parties, they do not give sufficient notice of patent boundaries. This information asymmetry can cause significant cost to competitors, particularly in the form of transaction costs. Accordingly, Australian law on innocent infringement, where possible, should be amended to enhance the efficiency of the patents system. Patent numbers should be required when patent marking. This can be achieved by adopting the mechanism in the UK innocent infringement provision which limits patent marking from effecting notice unless a patent number is included.<sup>94</sup>

As stated above, s 123 was based upon the equivalent UK section.<sup>95</sup> At the time the UK section stated, and continues to state that:

a person shall not be taken to have been so aware or to have had reasonable grounds for so supposing by reason only of the application to a product of the word ‘patent’ or ‘patented’, or any word or words expressing or implying that a patent has been obtained for the product, unless the number of the patent accompanied the word or words in question.<sup>96</sup>

In short, if patent marking is attempted in the UK using the word ‘patented’, and not followed by a patent number, then such marking cannot, by itself, discharge notice requirements. This appears as a relatively simple template solution for Australian legislators to adopt.

Against this solution, is an argument that because Australia is, economically speaking, a small jurisdiction, it is not cost efficient to have specific patent marking requirements for such a territory. However, this argument is fallacious for two reasons. First, as of 2013, Australia has the 12th largest GDP in the world,<sup>97</sup> and, as of 2012, ranks 11th for the most patents in force.<sup>98</sup> Second, this analysis of ‘cost efficiency’ puts the cost of patent marking on the wrong side of the ledger. Patent marking, as described above, is a principled position based on the efficiency and organisation of the patent system itself. Any system of allocation of resources through property rights requires demarcation of those rights for efficiency.<sup>99</sup> Otherwise, participants in the system do not know the boundaries of the property rights and costs will be unnecessarily expended in attempting to identify them, mitigating against efficiencies the system is supposed to confer.<sup>100</sup> Correct marking is part of the cost of

<sup>94</sup> *Patents Act 1977* (UK) c 37, s 62(1); *Lancer Boss Ltd v Henley Forklift Ltd* [1974] FSR 14, 27.

<sup>95</sup> *Report of the Committee Appointed by the Attorney-General of the Commonwealth to Consider What Alterations are Desirable in the Patent Law of the Commonwealth*, House of Representatives (1952) 41.

<sup>96</sup> *Patents Act 1949*, 12, 13 & 14 Geo 6, c 87, s 59(1); *Patents Act 1977* (UK) c 37, s 62(1).

<sup>97</sup> International Monetary Fund, *Report for Selected Countries and Subjects* (October 2013)

<<http://www.imf.org/external/pubs/ft/weo/2013/02/weodata/index.aspx>>; GDP (Current US\$), World Bank

<[http://data.worldbank.org/indicator/NY.GDP.MKTP.CD?order=wbapi\\_data\\_value\\_2012+wbapi\\_data\\_value+wbapi\\_data\\_value-last&sort=desc](http://data.worldbank.org/indicator/NY.GDP.MKTP.CD?order=wbapi_data_value_2012+wbapi_data_value+wbapi_data_value-last&sort=desc)>.

<sup>98</sup> World Intellectual Property Office, *World Intellectual Property Indicators* (WIPO Economic and Statistics Series, 2012) 79.

<sup>99</sup> William M Landes and Richard A Posner, *The Economic Structure of Intellectual Property* (Harvard University Press, 2003) 11–24.

<sup>100</sup> James Bessen and Michael J Meurer, *Patent Failure* (Princeton University Press, 2008) ch 1.

obtaining and enforcing a patent. Moreover, because a patentee who uses patent marks will encounter almost no extra cost if a patent number is included from the beginning of a production run, but third party transaction costs will be significantly reduced, cost analysis, from this point of view, actually favours marking with patent numbers.<sup>101</sup>

## II. Virtual Marking

### A. Advantages and Implementation in Australia

The enactment of the *Leahy-Smith America Invents Act 2011* (the 'AIA')<sup>102</sup> resulted in significant changes to US patent law. Included in the Act was a provision for virtual marking. US patent law now explicitly states that a patent holder can give notice that a product is patent protected by:

fixing thereon the word 'patent' or the abbreviation 'pat', together with the number of the patent, or by fixing thereon the word 'patent' or the abbreviation 'pat' together with an address of a posting on the Internet, accessible to the public without charge for accessing the address, that associates the patented article with the number of the patent.<sup>103</sup>

In his article tracing the AIAs legislative passage, Corey McCaffrey notes that, apart from brief supporting statements for virtual marking from the US Department of Commerce and clarifications from Senator Leahy (one of the sponsors of the AIA), the virtual marking amendments went unremarked.<sup>104</sup>

The rationale for virtual marking is simple. It serves as notification of patent rights like traditional marking, but has two major advantages: it signposts the reader to a repository of patent information; and this repository can be edited over time. This contrasts with traditional marking that uses immutable manufacturing and printing processes to convey only what is marked.<sup>105</sup> If a patent application lapses or is abandoned, if a granted patent expires, is not renewed, found invalid, rejected, if claims are invalidated or if claims are interpreted to not include a product, then it is likely that patent marks should be amended. Similarly, when a patent is granted but products are already marked 'patent pending', then those products and future products, should be marked differently. In a recent US case the defendant indicated that it would have cost the company over US\$500,000 to update their patent marking when the patent in question expired.<sup>106</sup>

<sup>101</sup> For an economic perspective on internalising notice externalities see, Peter S Menell and Michael J Meurer, 'Notice Failure and Notice Externalities' (2013) 5 *Journal of Legal Analysis* 1, 9–15.

<sup>102</sup> *America Invents Act of 2011*, Pub L No 112–29.

<sup>103</sup> 35 USC § 287(a).

<sup>104</sup> Corey McCaffrey, 'The Virtues of Virtual Marking in Patent Reform' (2011) 105 *Northwestern University Law Review* 367, 379.

<sup>105</sup> For a thorough US perspective on the advantages of virtual patent marking see, Corey McCaffrey, 'The Virtues of Virtual Marking in Patent Reform' (2011) 105 *Northwestern University Law Review* 367, 384–94.

<sup>106</sup> *Pequignot v Solo Cup*, 646 F. Supp. 2d 790, 793 (ED Va, 2009).

For products such as modern mobile devices, it is possible that there are hundreds of applicable patents.<sup>107</sup> If a product line has a minor patented improvement, it is costly and inconvenient to change marking to reflect the new patent. Virtual marking obviates the difficulties associated with altering marks or with many patents protecting a patent. There are no space restrictions on a website and when a new patent is granted or, more generally, its status changes, all that need be done is to update the website.<sup>108</sup>

One significant advantage of virtual marking for Australian patentees is that it can simplify the import and export of patented goods. Altering patent marks can be expensive, but one website can contain patent listings for all applicable jurisdictions, thereby synergistically removing the need for specific territorial markings. If Australia's marking laws are harmonised with those in the US to include virtual marking, whenever an Australian company wants to export to the US, they will not have to alter their physical patent marking to reflect their US patent number. All that need be done is update their website. This results in a much cheaper and more efficient process, making the export of Australian inventions easier. The reasoning also works in the other direction, making any importation of goods simpler. It is also envisaged that as the world adopts virtual marking laws, it will simplify global trade.

An argument against amending the *Patents Act* to specifically include virtual marking is that interpretation of s 123(1) and (2) of the *Patents Act* indicate that virtual marking is already likely to be sufficient to effect notice. As discussed in part I A of this chapter, s 123(1) probably imparts an objective test: whether in the circumstances a defendant had 'no reason to believe that a patent for the invention existed'. If a product marked with the phrase 'patented technology' is sufficient to give a reason to believe that a patent protects the product, it follows that labelling a product with 'patented www.yyy.com/zzz', would also be sufficient because it offers more information.

It has also been argued above that if a product is marked to indicate it is patented in Australia then the requirements for notice under s 123(2) are discharged. On this basis, the mark 'patented www.yyy.com.au/zzz' would appear to be sufficient because the 'au' indicates Australia. Whether or not the phrase 'patented www.yyy.com' would be sufficient is more contentious. However, if it is assumed the repository contains an Australian patent number, the mark would 'direct attention to'<sup>109</sup> the fact an Australian patent does exist. As a result, there are strong arguments under both innocent infringement provisions that virtual marking is already permitted in Australia.

<sup>107</sup> Steve Jobs, Keynote address (Speech delivered at Macworld, San Francisco, 1 September 2007). Steve Jobs stated over 200 patent protected the iPhone 1. Note that this figure may be slightly misleading due to pending applications and the fact that in the US 'patent' also refers to registered designs.

<sup>108</sup> See also, Peter S Menell and Michael J Meurer, 'Notice Failure and Notice Externalities' (2013) 5 *Journal of Legal Analysis* 1, 37–8.

<sup>109</sup> One of the definitions of 'indicate', *Macquarie Concise Dictionary* (Macquarie Dictionary Publishers, Online 6<sup>th</sup> ed, 2013); see part I B.

While statutory interpretation does suggest that virtual marking is sufficient to establish notice under current Australian innocent infringement law, there is one critical legal reason that necessitates specifying virtual marking in legislation. If a mark such as ‘patented www.yyy.com.au/zzz’ discharges notice requirements just as ‘patented in Australia’ does, there is no need to actually host a website. This defeats the purpose of providing a web address and the rationale underpinning innocent infringement. Moreover, despite the fact that such marks appear to discharge notice requirements under s 123(1) and (2), there are several other factors that remain to confuse the issue. First, because there is little or no current adoption of virtual patent marking in Australia,<sup>110</sup> the Internet address could be misinterpreted to be the product’s website rather than referring to patents protecting the product. Second, people may also assume that because virtual marking is not explicitly included in s 123, it is not sufficient for notice. Third, if a patentee wants to virtually mark their products but is not sure if it is sufficient for the purpose of s 123, they may have to obtain costly legal advice.

The result is that it makes sense to amend s 123 for the following reasons: business abhors uncertainty; the risk of limited remedies being available to a patent holder is significant; and it will save time and money. Importantly, using US law as a model, virtual marking could be simply and uncontroversially implemented. However, before this is done there are additional considerations that should be taken into account.

#### B. Additional Considerations

There are three additional issues that legislators should engage with before virtual marking is specified in the *Patents Act*. These concern how patent marking is evaluated for the purposes of discharging notice, what content a website must have, and whether a government body should create template websites and host them for patentees to use.

For the full utility of virtual marking to be realised in Australia, a change in the way patent marking is evaluated must occur. As argued above, if the mark, ‘patented www.yyy.com.au/zzz’ by itself discharges current notice requirements, there is no need to establish a website. To realise the full benefit of virtual marking then, a paradigm shift must occur from the provision only requiring an ‘appropriate mark’, to it requiring an ‘appropriate mark and sufficient content’. Or more specifically, not only must virtual marking take an appropriate form, but the website must contain sufficient information.

Requiring ‘appropriate mark and sufficient content’ sounds straightforward, but can lead to unusual outcomes. For example, notice will be effected if the form and content of the mark and website meets legislative criteria, even if an infringer never accesses the website and observes the patent

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<sup>110</sup> The author is unaware of any Australian company using virtual marking to discharge notice requirements in Australia.



number. Alternatively, if virtual marking is appropriate on a product and the infringer sees it, but the website is inaccessible or the content of the website does not satisfy all 'sufficient content' criteria, then although the infringer may have reason to believe a patent exists, notice will not be found effected. Both of the scenarios described do appear contrary to some reasoning articulated in this chapter. That is, in the first scenario the infringer has not observed the patent number but cannot plead innocent infringement. And in the second, the infringer may believe a patent exists but is able to plead innocent infringement. However, both results are logical and desired. One of the purposes of the rebuttable presumption of patent notice is to create a factual situation in which it is fair and efficacious to presume something has taken place. In the first example, the infringer is provided with information that makes it easy to access the relevant patent specification. In the second example, the infringer may believe a patent exists but it is resource intensive to find out which.

What generally constitutes appropriate content for a virtual marking website is less straight forward. From the analysis in part 1 of this chapter, it seems logical that a website listing all patent numbers relevant to a product is the minimum required; this is effectively the same as labelling a product with a patent number. However, companies have already experimented with listing patents on websites with varying degrees of success.<sup>111</sup> The limitless space of the Internet provides patent holders with almost infinite ways of providing information, enabling them to construct websites overburdened with information, which means it can be virtually impossible to gather anything meaningful from it. For example, if Apple or Google listed all their patents on a web page and stated that all products are protected by at least one patent in the list, it would take an inordinate amount of time to determine what patents protect which products. The website would lack clarity and effectively defeat the rationales for innocent infringement.

In the US, a number of cases have been decided that are relevant to this limitless space issue. For example, in 1951 a District Court in *Chicago Pneumatic Tool Co v Hughes Tool Co*,<sup>112</sup> held that providing a list of patents and stating that 'one or more' applied to a product, was sufficient to effect notice.<sup>113</sup> Additionally, in 1931, the Second Circuit in *Trussel Manufacturing Co v Wilson Jones Co*,<sup>114</sup> held that a mark that could only be seen through a magnifying glass was not sufficient to effect notice.<sup>115</sup> In the US there is also a requirement that patent marking is consistent and continuous.<sup>116</sup> If

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<sup>111</sup> For a non-exhaustive review see, Corey McCaffrey, 'The Virtues of Virtual Marking in Patent Reform' (2011) 105 *Northwestern University Law Review* 367, 380–4. Or for a current example see Symantec's patent marking website <[http://www.symantec.com/about/profile/policies/virtual\\_patent\\_marking.jsp](http://www.symantec.com/about/profile/policies/virtual_patent_marking.jsp)>.

<sup>112</sup> *Chicago Pneumatic Tool Co v Hughes Tool Co*, 192 F 2d 620, 625–6 (10<sup>th</sup> Cir, 1951); See also, *United States v General Electric Co*, 92 F Supp 753, 817 (DNJ, 1949).

<sup>113</sup> *Ibid* 625–6.

<sup>114</sup> *Trussel Manufacturing Co v Wilson-Jones Co*, 50 F 2d 1027 (2<sup>nd</sup> Cir, 1931).

<sup>115</sup> *Ibid* 1030.

<sup>116</sup> *Nike Inc v Wal-Mart Stores Inc*, 138 F 3d 1437, 1446 (Fed Cir, 1998); *American Medical Systems Inc v Medical Engineering Corp*, 6 F 3d 1523, 1538 (Fed Cir, 1993).

a website ceases to exist or a link becomes inactive, is this legally conclusive evidence that no patent is in force?

In McCaffrey's article, he analysed several companies' attempts at virtual marking and found that virtual marking by the golf company, Callaway, would probably not have satisfied the consistent and continuous requirement because some links were not active.<sup>117</sup> Although US courts have not elaborated on the reasoning behind the consistent and continuous requirement, it can be presumed it is to avoid confusion and to ensure it is fair to assume everyone has seen the marking. Australia lacks jurisprudence on these, and other related issues.<sup>118</sup> Decisions from other jurisdictions offer some guidance, but the dearth of case law in Australia does create a lack of clarity and possibly could lead to unintended outcomes. In particular, a logical resolution would require that Internet addresses be legible, specify which product is protected by what patent, and require that marking be consistent and continuous. It would be antithetical to the rationales for innocent infringement discussed in this chapter to find notice effected if Internet addresses do not work, or if a company can list all the patents they control and put a message at the top stating, 'one or more patents may apply' to the product.

There are also significant advantages if a government organisation, like IP Australia, creates template marking websites for patent holders to fill in, and that are hosted on IP Australia's servers.<sup>119</sup> This type of service has been suggested as a cost effective mechanism for patent holders,<sup>120</sup> and may be attractive for those who do not have a significant online presence or Internet-savvy background. If desired, IP Australia's site could then link in the relevant *AusPat* entries. Interestingly, since the passage of the AIA in the US, numerous virtual marking companies have emerged. These are companies specialising in managing virtual marking websites for patent holders.<sup>121</sup> It is foreseeable that companies would emerge in Australia too, and standards should be set expecting this.

## Conclusion

The recent succession of patent reform and government intellectual property inquiries in Australia indicates that the government is continually looking to improve and update the patent system.<sup>122</sup> It

<sup>117</sup> Corey McCaffrey, 'The Virtues of Virtual Marking in Patent Reform' (2011) 105 *Northwestern University Law Review* 367, 380–4.

<sup>118</sup> For a more thorough US perspective on this issue see, Corey McCaffrey, 'The Virtues of Virtual Marking in Patent Reform' (2011) 105 *Northwestern University Law Review* 367, 380–84.

<sup>119</sup> For a more thorough US perspective on this issue see, Corey McCaffrey, 'The Virtues of Virtual Marking in Patent Reform' (2011) 105 *Northwestern University Law Review* 367, 394–7.

<sup>120</sup> Letter from Gary Locke, Secretary of Commerce, Department of Commerce, to Patrick J Leahy, Chairman, and Members of the Committee on the Judiciary, 5 October 2009, <<http://www.judiciary.senate.gov/resources/documents/111Documents.cfm>>.

<sup>121</sup> For example, 'vMarked' offering specific services <[www.vmarked.com/](http://www.vmarked.com/)>, or 'PatentStatus' specific virtual marking software that tracks relationships between products and patents <[www.patentstatus.com/](http://www.patentstatus.com/)>.

<sup>122</sup> For example, *Intellectual Property Amendment Act (Raising the Bar) 2012* (Cth); *Intellectual Property Laws Amendment Act 2006* (Cth); Productivity Commission, *Compulsory Licensing of Patents*, Report No 61 (2013)

would be consistent with these efforts to consider amending innocent infringement law to specifically provide for virtual marking and require traditional marking with patent numbers.

Although much more research is needed to correct other elements of patent notice failure as identified by Bessen and Meurer, in the interim, there are clear advantages to starting the process of correcting patent notice failure through the process of patent marking with virtual marks or patent numbers. Advantages that are likely to flow from this include a reduction in transaction costs for other inventors and easing trade of patent protected products. Moreover, the cost to patentees of providing this information is, especially in the case of virtual marks, low and outweighs the transaction costs otherwise encountered by follow-on inventors. Such amendments will also harmonise Australia's innocent infringement laws with relevant US and UK provisions and are consistent with contemporary patent law theory.

The fact that patent marking and innocent infringement issues have not been significant questions for Australian courts to decide could be seen as providing evidence that the marking system is working well. Alternatively, as suggested in this chapter, because the Australian requirements for notice are so easily discharged, it is not worth contesting the point. Regardless, the Internet age that the world now exists in is not so much about fixing things that are broken, but rather it is about improving them.

## Chapter 7

Re-evaluating False Patent Marking in Australia<sup>1</sup>

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<sup>1</sup> This chapter has been published in, Johnathon E Liddicoat and Dianne Nicol, 'Re-Evaluating False Patent Marking in Australia' (2012–2013) 22(2) *Journal of Law, Information and Science* 128. Due acknowledgement of Professor Nicol's contributions has been made in both the Statements at the beginning of this thesis and in the Introduction to this thesis.

## Introduction

The final chapter of this thesis addresses law directed to preventing false representations about patents. More specifically, it analyses laws that prohibit parties falsely marking goods as protected by a patent. As examined below, this directly complements the previous chapter on innocent infringement, but it also complements the thesis more generally. Whereas the rest of this thesis has focused on arguments that could be made by litigants concerning how and when infringement occurs, this chapter deals with an aspect of the law that is designed to prohibit parties from representing to the world that a patent protects their product.

As noted in the previous chapter, the process of marking a product as patented is known as ‘patent marking’, and it is commonly achieved in Australia by marking a product with the terms: ‘patented’; ‘patented in Australia’; or ‘patented’ followed by a patent number. Patent rights holders use such marks because they can serve as notice of their patent rights, thereby preventing infringers from pleading innocent infringement.<sup>2</sup> Innocent infringement, as explored in detail in the previous chapter, refers to a scenario in which patent rights are infringed, but the infringing actions are completed when the infringer is unaware of, and has no reason to believe, they are infringing patent rights.<sup>3</sup> If innocent infringement is proven, a court may limit or refuse financial relief; that is, damages or an account of profits may be refused.<sup>4</sup> When patent marking is properly achieved, a rebuttable presumption arises: it is presumed that infringers are aware of the relevant patent rights unless the contrary is established.<sup>5</sup> On the other hand, when a product is marked with a patent but no patent rights actually apply to the marked product — otherwise known as ‘false patent marking’ — people may incorrectly believe that the technology in the product is protected by a patent and therefore think that infringement is risked if they copy technical aspects of the product.

False patent marking has recently come to prominence due to a ‘boom and bust’ cycle of litigation in the United States. As explored in this chapter, legal reasoning and litigation trends suggest that the boom was triggered by a change in understanding of the penalty for false patent marking.<sup>6</sup> Legal reasoning and litigation trends also suggest the bust was caused by judicial interpretation heightening the pleading requirements for the action, in combination with changes to the provision brought about by the *Leahy-Smith America Invents Act 2011* (the ‘AIA’).<sup>7</sup> Between January 2010 and

<sup>2</sup> For example, *Patents Act 1990* (Cth) s 123.

<sup>3</sup> *Ibid* s 123(1)–(2); see generally, Chapter 3.

<sup>4</sup> *Ibid*.

<sup>5</sup> *Ibid*.

<sup>6</sup> 35 USC § 292(a).

<sup>7</sup> For an overview see, Nicholas W Stephens, ‘From *Forest Group* to the *America Invents Act*: False Patent Marking Comes Full Circle’ (2011–2012) 97 *Iowa Law Review* 1003, 1007–25; Richard A Crudo, ‘A Patently Public Concern: Using Public Nuisance Law to Fix the False Patent Marking Statue After the Leahy-Smith America Invents Act’ (2012) 80 *George Washington Law Review* 568, 570–87; Christopher G Granaghan, ‘Off the Mark: Fixing the False Marking Statute’ (2011) 89 *Texas Law Review* 477, 477–93; Kevin Zickterman, ‘Pa-Trolling the False Marking Frontier: Giving Section 292 the Proper

July 2011, around 1000 false patent marking cases were filed in the US.<sup>8</sup> At the boom's peak, between March 2011 and April 2011, 109 cases were settled at a total estimated cost to wrongdoers of almost US\$4.5 million.<sup>9</sup> Prior to, and after the boom period, cases were filed far less frequently;<sup>10</sup> for example, between 2007 and 2009, 21 cases were filed.<sup>11</sup> By contrast, the Australian false patent marking provision under s 178(2) of the *Patents Act 1990* (Cth) (the '*Patents Act*')<sup>12</sup> has not been litigated, and only one false marking case has been decided under the equivalent of what is now s 18 misleading and deceptive conduct in the *Australian Consumer Law* ('*ACL*').<sup>13</sup>

In this chapter the causes of the US boom-bust cycle form the basis for an enquiry into whether false patent marking exists in Australia, and whether it is negatively affecting Australian businesses or consumers. There is no indication that Australia is ever likely to be exposed to the clogging nature of the false patent marking litigation observed in the US during the boom. But the sheer volume of cases in the US does tend to suggest that false patent marking may be a common problem more globally, including in Australia.

Part 1 of this chapter examines false patent marking law in the US. It is necessary to briefly touch on certain key cases to illustrate the causes of the boom and bust. Much of the cycle is influenced by what is called a '*qui tam*' action.<sup>14</sup> '*Qui tam*' is an abbreviation of the Latin phrase, *qui tam pro domino rege quam pro se ipso in hac parte sequitur*, which translates to, 'who as well for the king as for himself sues in this matter'.<sup>15</sup> It is an old common law writ that allows a private individual to prosecute offences in place of the crown and receive all, or part, of the penalty.<sup>16</sup> In England, *qui tam* actions emerged as a common law enforcement mechanism in the 14<sup>th</sup> century.<sup>17</sup> By enabling any person in the population to enforce laws on behalf of the state and receive part of the penalty, *qui*

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Makeover in Wake of the American Invents Act' (2012) 190 *Northern Illinois University Law Review* 189, 190–200; Justin E Gray, *False Marking – New Case Update* (3 August 2011) Gray on Claims <<http://www.grayonclaims.com/home/2011/8/3/false-marking-new-case-update.html>>; *America Invents Act of 2011*, Pub L No 112-29, 120 Stat 284.

<sup>8</sup> Justin E Gray, *False Marking – New Case Update* (3 August 2011) Gray on Claims <<http://www.grayonclaims.com/home/2011/8/3/false-marking-new-case-update.html>>.

<sup>9</sup> These figures were calculated using US government data. See, US Department of Justice, *Settlement Payments Received for Section 292 Cases - 2011*, <<http://www.justice.gov/civil/common/electread/2011/FalsePatent%20Marking%20Summary%202011.pdf>>.

<sup>10</sup> Laura N Arneson, 'Defining Unpatented Article: Why Labeling Products with Expired Patent Numbers Should Not Be False Marking' (2011–2012) 95 *Minnesota Law Review* 650, 660; Kirsten R Rydstron, Maria N Bernier and Joseph D Fillloy, 'Burning Down the Courthouse: *Qui Tam* Action under Section 292 of the False Marking Statute' (2011) 11 *Pittsburgh Journal of Technology Law and Policy* 1, 1; Elizabeth Winston, 'The Flawed Nature of the False Marking Statute' (2009) 77 *Tennessee Law Review* 111, 133; Bonnie Grant, 'Deficiencies and Proposed Recommendations to the False Marking Statute: Controlling Use of the term "Patent Pending"' (2004) 12 *Journal of Intellectual Property Law* 283.

<sup>11</sup> Michael R O'Neill, 'False Patent Marking Claims: The New Threat to Business' (2010) 22 *Intellectual Property and Technology Law Journal* 22, 28.

<sup>12</sup> *Patents Act 1990* (Cth).

<sup>13</sup> *Competition and Consumer Act 2010* (Cth) sch 2, s 18; *Elconnex Pty Ltd v Gerard Industries* (1991) 32 FCR 491.

<sup>14</sup> *Black's Law Dictionary* (West Group, 9<sup>th</sup> ed, 2009).

<sup>15</sup> *Ibid.*

<sup>16</sup> William Blackstone, *Commentaries on the Laws of England* (Harper & Brothers, 1850) vol 3, 161–2.

<sup>17</sup> See, J Randy Beck, 'The False Claims Act and the English Eradication of *Qui Tam* Legislation' (2000) 78 *North Carolina Law Review* 539, 565–70.

*tam* actions were seen as a practical way to enforce laws with scarce resources over quite large geographic areas.<sup>18</sup> *Qui tam* actions were used to enforce a wide range of laws, including performance of public functions, counterfeiting, consumption of alcohol, bribery of jurors and religious observance.<sup>19</sup> The plaintiff in a *qui tam* action is commonly referred to as a relator. *Qui tam* actions have a long history in the US,<sup>20</sup> and continue to operate there.<sup>21</sup> Between 1842 and 2011, false patent marking in the US operated as a *qui tam* action.<sup>22</sup> Although this interesting artefact of English law was transplanted to the US,<sup>23</sup> to the author's knowledge, it never made it to Australian shores.

The wealth of US case law provides clear guidance on the interpretation of the false patent marking provision in that jurisdiction, particularly the relevant physical and mental aspects of the offence, as well as procedural issues. In contrast, the lack of case law in Australia means that there is no judicial guidance on how to interpret s 178(2) of the *Patents Act*, and the rudimentary scholastic commentary from commercial law firms provides little assistance.<sup>24</sup> However, the rich body of US case law provides guidance in examining how the Australian provisions might be interpreted. Moreover, by identifying the legal causes of the boom and bust in the US, they can then be used to examine whether the scant Australian case law results from the operation of the law, or from a genuine lack false patent marking in Australia. That is, since there has been minimal litigation in Australia, if the legal causes of the boom in the US are present in Australia, then the evidence tends to indicate that false patent marking does not exist in Australia. With this in mind, part 2 of this chapter analyses s 178(2) of the *Patents Act* against the backdrop of US cases. Sections 18, 29 and 33 under the *ACL* are also included in this analysis because they arguably provide additional causes of action and, if applicable, would offer an enhanced range of remedies.

Although the the comparison of US and Australian law does not conclusively deduce that false patent marking does not exist in Australia, it does suggest that if false patent marking is occurring, it is not causing significant competitive harm. Nevertheless, when the results of this comparison are evaluated from a realistic assessment of harms caused by false patent marking, cracks appear in the operation of the Australian false patent marking provisions. Part 3 of this chapter considers the

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<sup>18</sup> Ibid 567.

<sup>19</sup> See generally, ibid 565–73, 592–601.

<sup>20</sup> See generally, ibid 566.

<sup>21</sup> Ibid 553–65.

<sup>22</sup> 35 USC § 292(a), as amended by *America Invents Act of 2011*, Pub L No 112–29, § 16, 120 Stat 284, 329.

<sup>23</sup> J Randy Beck, 'The False Claims Act and the English Eradication of Qui Tam Legislation' (2000) 78 *North Carolina Law Review* 539, 548.

<sup>24</sup> For example, David Hughes and Georgina Higginbotham, 'False Marking Stakes Raised in the US' (2010) *Intellectual Property Law Bulletin* 115; Mark Summerfield, *Reintroduced US IP Bill to Slay the False marking Troll* (11 January 2011) Patentology <<http://blog.patentology.com.au/2011/01/reintroduced-us-ip-bill-to-slay-false.html>>; John Swinson, *Selling Goods in the US: The Importance of Correct Marking* (12 January 2010) King & Wood Mallesons <<http://www.mallesons.com/publications/marketAlerts/2010/SellinggoodsintheUStheimportanceofcorrectpatentmarking/Pages/default.aspx>>.

punishment for false patent marking in Australia, focusing on an economic approach to the provision and a calculation of penalties. This approach, posited by a leading legal-economic scholar, is based on the wrongdoer disgorging any benefit obtained through false patent marking. Drawing on the analysis throughout this chapter, this part also considers other amendments for improving the operation of s 178(2). Ultimately this chapter concludes that various changes should be implemented to create more effective laws prohibiting false patent marking.

## I. The US Experience

The cases discussed in this section have been selected because they illustrate key aspects of the boom-bust cycle pertinent to the operation of false patent marking in Australia. There are numerous other factors relevant to the US cycle, for example unique US constitutional issues, but they are not addressed in this chapter because they are not relevant to the Australian provision.<sup>25</sup> The three aspects discussed are: the physical requirements of the offence; the mental requirements of the offence; and, the penalty.

Prior to the passage of the AIA, the US provision on false patent marking, 35 USC § 292, stated:

(a) ...<sup>26</sup>

Whoever marks upon, or affixes to, or uses in advertising in connection with any unpatented article, the word “patent” or any word or number importing that the same is patented for the purpose of deceiving the public; or

Whoever marks upon, or affixes to, or uses in advertising in connection with any article, the words “patent applied for,” “patent pending,” or any word importing that an application for patent has been made, when no application for patent has been made, or if made, is not pending, for the purpose of deceiving the public-

Shall be fined not more than \$500 for every such offense.

(b) Any person may sue for the penalty, in which even one-half shall go to the person suing and the other to the use of the United States.<sup>27</sup>

In 2005, prior to the boom, the Federal Circuit in *Clontech Laboratories Inc v Invitrogen Corp* (*‘Clontech’*)<sup>28</sup> held that to succeed in a false patent marking action, two elements had to be proved.

<sup>25</sup> For a more thorough account of the legal causes of the boom and bust, including the numerous US constitutional and standing issues see, Kevin Zickterman, ‘Pa-Trolling the False Marking Frontier: Giving Section 292 the Proper Makeover in Wake of the American Invents Act’ (2012) 190 *Northern Illinois University Law Review* 189, 190–218; Nicholas W Stephens, ‘From Forest Group to the America Invents Act: False Patent Marking Comes Full Circle’ (2011–2012) 97 *Iowa Law Review* 1003, 1007–25; Richard A Crudo, ‘A Patently Public Concern: Using Public Nuisance Law to Fix the False Patent Marking Statue After the Leahy-Smith America Invents Act’ (2012) 80 *George Washington Law Review* 568, 570–87; Christopher G Granaghan, ‘Off the Mark: Fixing the False Marking Statute’ (2011) 89 *Texas Law Review* 477, 477–93.

<sup>26</sup> The first paragraph of 35 USC § 292(a) deals with imitating a patentee.

<sup>27</sup> 35 USC § 292.

<sup>28</sup> *Clontech Laboratories Inc v Invitrogen Corp*, 406 F 3d 1347 (Fed Cir, 2005).



First, it had to be shown that the marked article was ‘unpatented’.<sup>29</sup> That is, the article had to be shown not to be protected by the patent it was marked with — determined by interpreting the claims of the patent that the product was marked with.<sup>30</sup> Second, the marking party had to have the relevant mental state, that is, an intention to deceive the public.<sup>31</sup> In classic legal terminology these elements can be described as the *actus reus* and *mens rea* of the offence.

On the *actus reus* element of the action, until the Federal Circuit case of *Pequignot v Solo Cup* (*Solo Cup*),<sup>32</sup> there was no decision on whether the phrase ‘unpatented article’ was satisfied by products marked with an expired patent that previously protected them. There are strong arguments that marking articles with expired patent numbers should not constitute ‘unpatented’ because people can look up the patents on the Internet and see they are expired.<sup>33</sup> Indeed, the marks may even be beneficial because they indicate where information about technological advances used in the product can be found and freely used.<sup>34</sup> However, the Federal Circuit found in *Solo Cup* that marking an article as patented in reliance on an expired patent that previously protected it was sufficient to satisfy the physical element of false patent marking.<sup>35</sup>

Prior to the decisions of *Solo Cup* and *Clontech*, the *mens rea* requirements that could be inferred from the physical aspects of false patent marking were not well defined. Characterising the law in this area, the Federal Circuit in *Clontech* stated that:

intent to deceive is a state of mind arising when a party acts with sufficient knowledge that what it is saying is not so and consequently that the recipient of its saying will be misled into thinking that the statement is true.<sup>36</sup>

The Court then continued:

Intent to deceive, while subjective in nature, is established in law by objective criteria. Thus, ‘objective standards’ control and the fact of misrepresentation coupled with proof that the party making it had knowledge of its falsity is enough to warrant drawing the inference that there was a fraudulent intent.<sup>37</sup>

In *Solo Cup*, the Federal Circuit took up this reasoning from *Clontech*, stating that false patent marking, combined with knowledge that the marking was incorrect, creates a rebuttable

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<sup>29</sup> 35 USC § 292(a).

<sup>30</sup> *Ibid*; *Clontech*, 406 F 3d 1347, 1352 (Fed Cir, 2005).

<sup>31</sup> 35 USC § 292(a); *Clontech*, 406 F 3d 1347, 1352 (Fed Cir, 2005).

<sup>32</sup> *Pequignot v Solo Cup*, 608 F 3d 1356 (Fed Cir, 2010).

<sup>33</sup> *Ibid* 1362.

<sup>34</sup> Laura N Arneson, ‘Defining Unpatented Article: Why Labeling Products with Expired Patent Numbers Should Not Be False Marking’ (2011–2012) 95 *Minnesota Law Review* 650, 668–70.

<sup>35</sup> *Pequignot v Solo Cup*, 608 F 3d 1356, 1361–2 (Fed Cir, 2010).

<sup>36</sup> *Clontech Laboratories Inc v Invitrogen Corp*, 406 F 3d 1347, 1352 (Fed Cir, 2005).

<sup>37</sup> *Ibid* (references omitted).

presumption of intent to deceive the public.<sup>38</sup> While the defendant was able to rebut the presumption in *Solo Cup*,<sup>39</sup> the case was important because it established clear guidance on how to address the *mens rea* requirement for false patent marking. As a result, the rebuttable presumption of intention to deceive eased the process for future plaintiffs in false patent marking actions.<sup>40</sup>

#### A. The Boom

Although *Solo Cup* provided clarity on the interpretation of the false patent marking provision in US patent law, the most influential development leading to the false patent marking boom in litigation was a change in the understanding of the penalty. In 2009, the Federal Circuit in *Forest Group Inc v Bon Tool Company* ('*Forest Group*')<sup>41</sup> comprehensively interpreted the provision setting out the penalty for false patent marking: 'shall not be fined more than \$500 for every such offense'. Prior to *Forest Group*, a variety of approaches to determining penalties for false patent marking existed.<sup>42</sup> Since the Circuit Court of Appeals case of *London v Everett H Dunbar Corp* ('*London*') in 1910,<sup>43</sup> the orthodox approach to determining the penalty was that individual acts of continuous false patent marking constituted a 'single offence'.<sup>44</sup> However, the Court in *Forest Group* was presented with a slightly different penalty provision to that in *London*, allowing it to distinguish the earlier case in its reasoning.<sup>45</sup> The Court in *Forest Group* gave a literal meaning to the phrase 'every such offense',<sup>46</sup> which meant that every article falsely marked could be penalised up to \$500.<sup>47</sup> The result of this approach to calculating penalties is significant: the reasoning in *London* meant that a single manufacturing run of 500 falsely marked widgets would result in a fine of up to \$500, but under *Forest Group*, the fine could be assessed at up to \$250,000.

It has been convincingly argued by many commentators that this increase in potential fines was instrumental in the proliferation of false patent marking cases.<sup>48</sup> For example, data on the number of false patent marking cases filed during the boom period have been compiled by Justin Gray on his

<sup>38</sup> *Pequignot v Solo Cup*, 608 F 3d 1356, 1361–2 (Fed Cir, 2010).

<sup>39</sup> *Ibid* 1363.

<sup>40</sup> *Ibid*.

<sup>41</sup> *Forest Group Inc v Bon Tool Company*, 590 F 3d 1295 (Fed Cir, 2009).

<sup>42</sup> *Ibid* 1301–02; Christopher G Granaghan, 'Off the Mark: Fixing the False Marking Statute' (2011) 89 *Texas Law Review* 477, 486–7.

<sup>43</sup> *London v Everett H Dunbar Corp*, 179 F 506 (1<sup>st</sup> Cir, 1910).

<sup>44</sup> *Ibid* 508; *Forest Group Inc v Bon Tool Company*, 590 F 3d 1295, 1301–2 (Fed Cir, 2009); Christopher G Granaghan, 'Off the Mark: Fixing the False Marking Statute' (2011) 89 *Texas Law Review* 477, 486–8.

<sup>45</sup> *Forest Group Inc v Bon Tool Company*, 590 F 3d 1295, 1302 (Fed Cir, 2009).

<sup>46</sup> *Ibid* 1301–2.

<sup>47</sup> *Ibid* 1303.

<sup>48</sup> See eg, Michael R O'Neill, 'False Patent Marking Claims: The New Threat to Business' (2010) 22 *Intellectual Property and Technology Law Journal* 22, 22–3; Maria N Bernier and Joseph D Fillloy, 'Burning Down the Courthouse: *Qui Tam* Action under Section 292 of the False Marking Statute' (2011) 11 *Pittsburgh Journal of Technology Law and Policy* 1, 3–4; Nicholas W Stephens, 'From *Forest Group* to the *America Invents Act*: False Patent Marking Comes Full Circle' (2011–2012) 97 *Iowa Law Review* 1003, 1011–12.

blog 'Gray on Claims'.<sup>49</sup> Gray produced this data using a commercially provided patent litigation database.<sup>50</sup> Gray's data shows that the boom in filings began in January 2010, immediately following the Federal Circuit decision of *Forest Group*, which was handed down on 28 December 2009.<sup>51</sup>

Together with the boom in filings, a boom in settlements also occurred. As the US government received half the financial penalty, settlement data have been authoritatively recorded. These data show that at the peak of the boom during March and April 2011, 109 cases were settled, each at an average value of around US\$41,000, a total penalty of almost US\$4.5 million in two months.<sup>52</sup> In total, between May 2010 and December 2011, 512 complaints were settled at a total of just over US\$22 million.<sup>53</sup> The types of items that false patent marking claims applied to were many and varied, ranging from bow-ties,<sup>54</sup> and stilts,<sup>55</sup> to motor oil,<sup>56</sup> and laboratory reagents.<sup>57</sup> In many instances the patent marks were only false because the relevant patent(s) had expired.<sup>58</sup>

Analysis of the government data shows that a side-effect of the boom was that a class of professional relators emerged. **Table 6** shows the average settlement value of the top 10 companies per number of false patent marking claims settled. The table is headed by Patent Group LLC which grossed US\$1.44 million and Promote Innovation LLC, which grossed US\$1.85 million. This overlaps with Gray's data which shows the number of cases filed by these companies. In Gray's data, as of 3 August 2011, Patent Group LLC had filed 178 cases and Promote Innovation LLC, 70.<sup>59</sup>

<sup>49</sup> Justin E Gray, *False Marking – New Case Update* (3 August 2011) Gray on Claims <<http://www.grayonclaims.com/home/2011/8/3/false-marking-new-case-update.html>>.

<sup>50</sup> Doctor Navigator (2013) <<http://home.docketnavigator.com/>>.

<sup>51</sup> *Forest Group Inc v Bon Tool Company*, 590 F 3d 1295, 1296 (Fed Cir, 2009).

<sup>52</sup> US Department of Justice, *Settlement Payments Received for Section 292 Cases - 2011*, <<http://www.justice.gov/civil/common/elecread/2011/FalsePatent%20Marking%20Summary%202011.pdf>>.

<sup>53</sup> *Ibid.* These figures were calculated using US government supplied data. See, US Department of Justice, *Settlement Payments Received for Section 292 Cases - 2010*

<<http://www.justice.gov/civil/common/elecread/2010/292%20Payment%20Chart%202010%20through%20Dec%2031%202010.pdf>>.

<sup>54</sup> *Stauffer v Brooks Brothers Inc*, 619 F 3d 1321 (Fed Cir, 2010).

<sup>55</sup> *Forest Group Inc v Bon Tool Company*, 590 F 3d 1295 (Fed Cir, 2009).

<sup>56</sup> *Re BP Lubricants USA Inc*, 637 F 3d 1307 (Fed Cir, 2011).

<sup>57</sup> *Clontech Laboratories Inc v Invitrogen Corp*, 406 F 3d 1347 (Fed Cir, 2005).

<sup>58</sup> See, eg, *Re BP Lubricants USA Inc*, 637 F 3d 1307, 1309 (Fed Cir, 2011); *Stauffer v Brooks Brothers Inc*, 619 F 3d 1321, 1322 (Fed Cir, 2010).

<sup>59</sup> Justin E Gray, *False Marking – New Case Update* (3 August 2011) Gray on Claims <<http://www.grayonclaims.com/home/2011/8/3/false-marking-new-case-update.html>>.

**Table 6** Average settlement value for the top US companies by number of false patent marking cases settled<sup>60</sup>

#	Relator	No. of Cases Settled	Total Value Rec'd by Gov't/Relator	Total Value Paid by Defendants	Mean Settlement Value Received by Government or Relator	Mean Settlement Value Paid by Defendant
1.	Patent Group	112	1 438 987.11	\$2 877 974.22	\$12 848.10	\$25 696.20
2.	Promote Innovation LL	53	1 853 000.00	\$3 706 000.00	\$34 962.26	\$69 924.53
3.	San Francisco Technology LLC	44	579 325.41	\$1 158 650.82	\$13 166.49	\$26 332.97
4.	Main Hastings LLC	40	473 250.00	\$946 500.00	\$11 831.25	\$23 662.50
5.	Tex Pat	29	712 250.00	\$1 424 500.00	\$24 560.34	\$49 120.69
6.	GHJ Holdings LLC	29	429 000.00	\$858 000.00	\$14 793.10	\$29 586.21
7.	Unique Product Solutions	17	235 375.00	\$470 750.00	\$13 845.59	\$27 691.18
8.	Patect LLC	15	343 750.00	\$687 500.00	\$22 916.67	\$45 833.33
9.	Thomas A Simonian	13	683 750.00	\$1,367,500.00	\$52 596.15	\$105 192.31
10.	Kilt Resources LLC	10	74 000.00	\$148 000.00	\$7400.00	\$14 800.00

The rise of professional relators is particularly interesting because of its similarity to the historical use of *qui tam* actions. With significant financial gain to be made, it is perhaps not surprising that an industry of professional relators has emerged on more than one occasion.<sup>61</sup> During the use of *qui tam* actions in England, it became common for relators to reach settlements that were illegal,<sup>62</sup> to entrap victims, and to use the threat of a *qui tam* action as blackmail.<sup>63</sup> As a result, relators gained a poor reputation. Sir Edward Coke in his seminal books, 'Institutes of the Laws of England', describes

<sup>60</sup> These figures were calculated using US government supplied data. See, US Department of Justice, *Settlement Payments Received for Section 292 Cases - 2010*

<<http://www.justice.gov/civil/common/elec/read/2010/292%20Payment%20Chart%202010%20through%20Dec%2031%202010.pdf>>; and US Department of Justice, *Settlement Payments Received for Section 292 Cases - 2011*, <<http://www.justice.gov/civil/common/elec/read/2011/FalsePatent%20Marking%20Summary%202011.pdf>>.

<sup>61</sup> J Randy Beck, 'The False Claims Act and the English Eradication of Qui Tam Legislation' (2000) 78 *North Carolina Law Review* 539, 576–9; see also, Elizabeth Winston, 'The Flawed Nature of the False Marking Statute' (2009) 77 *Tennessee Law Review* 111, 138–9; Craig Deutsch, 'Restoring Truth: An Argument to Remove the Qui Tam Provision from the false Marking Statute of the Patent Act' (2010) 11 *Minnesota Journal of Law Science and Technology* 829, 846–51; Christopher G Granaghan, 'Off the Mark: Fixing the False Marking Statute' (2011) 89 *Texas Law Review* 477, 489–91.

<sup>62</sup> J Randy Beck, 'The False Claims Act and the English Eradication of Qui Tam Legislation' (2000) 78 *North Carolina Law Review* 539, 580–1.

<sup>63</sup> *Ibid* 581–3; William Holdsworth, *A History of English Law* (Methuen & Co, 1903) vol 4, 355–6.

relators in the 17<sup>th</sup> century as ‘viperous vermin’ and a disordered class of men.<sup>64</sup> As a side note, Professor Beck, in his treatise on *qui tam* actions, remarks that as a result of abuses and the establishment of a more comprehensive professional police force and public prosecutors, the number of *qui tam* actions contained in UK legislation declined.<sup>65</sup> In 1951, to almost universal support,<sup>66</sup> the *Common Informers Act 1951* eliminated them completely.<sup>67</sup>

While describing modern false patent marking relators as viperous vermin is unduly harsh, some commentators have labelled them as ‘patent marking trolls’,<sup>68</sup> opportunistically obtaining finances through litigation that often corrects no harm to society, and serves only to clog the courts.<sup>69</sup>

## B. The Bust

There are two events which have been linked to the bust phase of the US litigation. The first is the Federal Circuit decision in *Re BP Lubricant’s USA Inc* (*‘BP Lubricants’*).<sup>70</sup> The second is the enactment of the *AIA*, particularly the provisions amending 35 USC § 292.

The defendant in *BP Lubricants* argued that the pleading requirements for false patent marking had not been met.<sup>71</sup> The relevant court rules require that when alleging fraud — which includes an intention to deceive the public<sup>72</sup> — the plaintiff must ‘plead in detail “the specific who, what, when, where, and how” of the alleged fraud’.<sup>73</sup> The relator’s pleadings in *BP Lubricants* stated that the defendant was a sophisticated company and knew, or should have known, that the relevant patent had expired.<sup>74</sup> Applying the Court’s rule, the Federal Circuit did not accept that this was sufficient to

<sup>64</sup> Edward Coke, *The Third Part of the Institute of the Laws of England* (W Clarke & Sons, 1628) 194.

<sup>65</sup> J Randy Beck, ‘The False Claims Act and the English Eradication of Qui Tam Legislation’ (2000) 78 *North Carolina Law Review* 539, 592–3. Although not directly relevant to false patent marking, the reader should be aware that *qui tam* actions played their own part in the development of the *Statute of Monopolies* in 1624. Prior to the *Statute of Monopolies*, monarchs would award monopolies to enforce *qui tam* actions to certain people. The arbitrary nature of these awards frustrated the utility of *qui tam* actions and their general abuses (detailed in the text) influenced the drafting of the *Statute of Monopolies* to stop monarchs from making such awards: at 589.

<sup>66</sup> See, *ibid* 605–8.

<sup>67</sup> *Common Informers Act 1951*, 14 & 15 Geo 6, c 39.

<sup>68</sup> See eg, Mark H Anania and Carissa L Rodrigue, ‘Combating the Rise of False Marking Trolls’ (2011) 29 *Intellectual Property & Technology Law Journal* 3; Donald W Rupert, ‘Trolling for Dollars: A New Threat to Patent Owners’ (2009) 21 *Intellectual Property & Technology Law Journal* 1; Richard M Assmus, Robert J Kriss and Jeffrey W Sarles, *Watch Out for the Patent Marking Trolls* (2010) Mayer Brown <<http://www.mayerbrown.com/publications/watch-out-for-the-patent-marking-trolls-03-01-2010/>>.

<sup>69</sup> Marla Grossman and Adam Lerner, *Out of Balance: The False Patent Marking Landscape Post-Bon Tool and Solo Cup* (2 August 2010) Institute for Policy Innovation <[http://www.ipi.org/ipi\\_issues/detail/out-of-balance-the-false-patent-marking-landscape-post-bon-tool-and-solo-cup](http://www.ipi.org/ipi_issues/detail/out-of-balance-the-false-patent-marking-landscape-post-bon-tool-and-solo-cup)>; Charles R Macedo, ‘Intent Must be Pleaded with Particularity for False Marking Claim in Use’ (2011) 7 *Journal of Intellectual Property Law & Practice* 425, 425; Kevin Zickterman, ‘Pa-Trolling the False Marking Frontier: Giving Section 292 the Proper Makeover in Wake of the American Invents Act’ (2012) 190 *Northern Illinois University Law Review* 189, 239–40.

<sup>70</sup> *Re BP Lubricants USA Inc*, 637 F 3d 1307 (Fed Cir, 2011).

<sup>71</sup> *Ibid*.

<sup>72</sup> *Ibid* 1309–10.

<sup>73</sup> *Ibid* 1309

<sup>74</sup> *Ibid* 1311.

prove they knew the patent marks were false, stating much more specific factual evidence was needed.<sup>75</sup> Accordingly, the relator's action failed.<sup>76</sup>

The outcome of *BP Lubricants* meant that obtaining the required evidence to prove a plaintiff knew the marks were false became more difficult. *BP Lubricants* was handed down on 15 March 2011, and the number of filings dropped almost immediately.<sup>77</sup> While the decision in *BP Lubricants* is linked to the drop in filings, the *AIA* also played a role. Indeed the greatest settlement for a false patent claim, US\$2,000,000, occurred after *BP Lubricants* had been decided.<sup>78</sup>

The *AIA* first passed the Senate, its originating chamber, on 8 March 2011.<sup>79</sup> From then onwards the sections in the *AIA* amending false patent marking were not altered, and they were always designed to end pending cases that did not fit the new criteria.<sup>80</sup> Post-*AIA*, the definitions of the offence were retained in § 292(a) but the penalty altered and standing requirements changed. The relevant sections of § 292(a), (b) and (c) now state:

(a)...

Shall be fined not more than \$500 for every such offense. Only the United States may sue for the penalty authorized by this subsection.

(b) A person who has suffered a competitive injury as a result of a violation of this section may file a civil action in a district court of the United States for recovery of damages adequate to compensate for the injury.

(c) The marking of a product, in a manner described in subsection (a), with matter relating to a patent that covered that product but has expired is not a violation of this section.<sup>81</sup>

In addition, the *AIA* specifies that in relation to 35 USC § 292, '[t]he amendments ... shall apply to all cases, without exception, that are pending on, or commenced on or after, the date of the enactment of this Act [Sept. 16, 2011].'<sup>82</sup>

The *AIA* was signed into law on 16 September 2011. Between October 2011 and May 2013, nine new false patent marking suits had been filed,<sup>83</sup> and only one proceeded to an order of financial relief.

<sup>75</sup> Ibid.

<sup>76</sup> Ibid.

<sup>77</sup> Ibid; Nicholas W Stephens, 'From *Forest Group* to the *America Invents Act*: False Patent Marking Comes Full Circle' (2011–2012) 97 *Iowa Law Review* 1003, 1013; Justin E Gray, *Decrease in New False Marking Cases Filed Post In re BP Lubricants* (31 March 2011) Gray on Claims <<http://www.grayonclaims.com/home/2011/3/31/decrease-in-new-false-marking-cases-filed-post-in-re-bp-lubr.html>>.

<sup>78</sup> Justin E Gray, *False Marking – Settlement Update* (9 August 2011) Gray on Claims

<<http://www.grayonclaims.com/home/2011/8/9/false-marking-settlement-update.html>>.

<sup>79</sup> *AIA Implementation Information* (2013) The United States Patent and Trademark Office <[http://www.uspto.gov/aia\\_implementation/resources.jsp](http://www.uspto.gov/aia_implementation/resources.jsp)>.

<sup>80</sup> 35 USC § 292(a), as amended by *America Invents Act of 2011*, Pub L No 112-29, § 16(4), 120 Stat 284, 329.

<sup>81</sup> 35 USC § 292(b)–(c).

<sup>82</sup> *America Invents Act*, Pub L No 112-29, § 16(b)(4), 125 Stat 284, 329.

The retrospective effect of the false patent marking provision of the *AIA* also resulted in the winding up of cases already on foot that did not fit the new standing criteria, including those on appeal.<sup>84</sup> Consequently, *BP Lubricants*, and the *AIA* have reduced false patent marking cases filed to numbers similar to those observed pre-*Forest Group*. The *AIA* achieved this through: limiting standing to plaintiffs who suffered competitive injury; limiting financial relief to correcting competitive injury suffered; and defining false patent marking to exclude marks that refer to expired patents that once applied to the marked product.

## II. Comparison of US and Australian False Patent Marking Law

### A. Section 178(2) of the *Patents Act*

A provision penalising false patent marking was introduced into Australian patent law with the passage of the *Patents Act 1952* (Cth).<sup>85</sup> This provision has changed very little over the years and has never been litigated.<sup>86</sup> Including recent amendments to the penalty resulting from the *Intellectual Property (Raising the Bar) Act 2011* (Cth),<sup>87</sup> the section now states:

(2) A person must not falsely represent that an article sold by him or her is patented in Australia, or is the subject of an application for a patent in Australia.

Penalty: 60 penalty units

(3) Without limiting subsection (2):

(a) a person is to be taken to represent that an article is patented in Australia if the word “patent” or “patented”, the words “provisional patent”, or any other word or words implying that a patent for the article has been obtained in Australia, are stamped, engraved or impressed on, or otherwise applied to, the article; and

(b) a person is to be taken to represent that an article is the subject of an application for a patent in Australia if the words “patent applied for” or “patent pending”, or any other word or words implying that an application for a patent for the article has been made in Australia, are stamped, engraved or impressed on, or otherwise applied to, the article.

<sup>83</sup> Search completed using Docket Navigator, <<https://www.docketnavigator.com/entry/home>>.

<sup>84</sup> *FLFMC LLC v Wham-O Inc*, 444 Fed Appx 447, 448 (Fed Cir, 2011).

<sup>85</sup> *Patents Act 1952* (Cth) s 174.

<sup>86</sup> A variety of trivial changes have occurred, the penalty changed currency under the *Statute Law Revision (Decimal Currency) Act 1966* (Cth) s 3, consent had to be sought from the Attorney General instead of the Minister until the *Administrative Changes (Consequential Provisions) Act 1976* (Cth) s 3, the description of the penalty was changed from words to numbers under the *Patents Amendment Act 1979* (Cth) sch 1 item 3, a separate fine was instituted for natural persons and corporate entities under the *Statute Law (Miscellaneous Provisions) Act (No. 1) 1985* (Cth) s 3 but this was changed to one fine regardless of the incorporation in the *Patents Act 1990* (Cth) s 178(2) and the *Intellectual Property Amendment (Raising the Bar) Act 2011* sch 4 item 12 changed the penalty from a static financial penalty to 60 penalty units.

<sup>87</sup> *Intellectual Property Amendment (Raising the Bar) Act 2011* (Cth).

(4) A prosecution must not be started for an offence against subsection (1) or (2) without the consent of the Minister, or a person authorised by the Minister.<sup>88</sup>

Comparing the Australian provision to features of the US equivalent, the Australian section imposes a 60 penalty unit fine (\$10,800),<sup>89</sup> but on what basis it is to be calculated – that is, the number of articles marked, or production runs – is not specified. Similarly, the provision does not explicitly require a *mens rea* element, nor is it clear whether it applies to expired patents that once protected a marked product. Thus, to compare comprehensively Australian and UK law, each of these issues are analysed below in connection with the boom of litigation in the US.

In light of the US decision in *Solo Cup* it is necessary to consider whether s 178(2) would be interpreted to apply to marks that refer to an expired patent that once protected the article. The key phrase in s 178(2) is, '[a] person must not falsely represent that an article ... *is patented* in Australia...'.<sup>90</sup> 'Patented' is not defined in the *Patents Act*, but 'patented process' and 'patented product' are: both definitions specifically refer to a patent that has 'been granted and is in force'.<sup>91</sup> Moreover, since the *Patents Act* broadly divides inventions into two categories that match these definitions – that is, processes and methods<sup>92</sup> – this definition suggests that the term 'patented' refers to any patent that is currently in force. Consequently, it seems likely that the *actus reus* element of provision will be satisfied when a product is marked indicating it is patented but a patent does not actually apply to the product. By corollary, this also means that if a patent is marked with an expired patent that once protected it, then that also satisfies the *actus reus* element.

As demonstrated in *BP Lubricants*, the mental element that must be proved and the level of detail that is required in the pleadings can affect the outcome of false patent marking cases. The use of the term 'offence' in s 178(4) combined with the relatively low level fine (compared to other criminal offences) indicates that false patent marking is a summary offence. Relevantly, the *Patents Act* states that, '[c]hapter 2 of the *Criminal Code* applies to all offences created under the Act',<sup>93</sup> therefore false marking must be proved beyond reasonable doubt.<sup>94</sup> But, unlike the US provision, no mental aspect is mentioned. Whether it is intended to be a strict liability offence is not clear. On this point, the phrase 'falsely represent' is used in s 178(2). The term 'represent' is partially defined in sub-ss (3)(a) and (b), but 'falsely' is not. In this sense, 'falsely' is the adverb of 'false'. The Macquarie dictionary defines 'false' to include being 'deceitful', as well as 'erroneous'. 'Deceitful' is defined to mean

<sup>88</sup> *Patents Act 1990* (Cth) s 178(2)–(4).

<sup>89</sup> *Crimes Act 1914* (Cth) s 4AA.

<sup>90</sup> *Patents Act 1990* (Cth) s 178(2) (emphasis added).

<sup>91</sup> *Ibid* sch 1 (definition of 'patented product' and 'patented process').

<sup>92</sup> *Ibid* sch1 (definition of 'exploit').

<sup>93</sup> *Ibid* s 12A.

<sup>94</sup> *Criminal Code Act 1995* (Cth) sch 1, 13.2.



knowing that a representation is not true, while 'erroneous' includes being mistaken.<sup>95</sup> The consequence of this dual definition is that the denotation of 'falsely represent' encompasses the possibility of the offence being one of strict liability, that is, it need only be proven that the mark is false. But it also encompasses the possibility of it requiring a *mens rea* examination, that is, it must be proved the representor knew the mark was false.

The *Criminal Code Act 1995* (Cth) is also instructive on *mens rea* elements. It specifies that if a:

law creating an offence does not specify a fault element for a physical element that consist only of conduct [as opposed to a physical element that consists of a circumstance or result], intention is the fault element for that physical element.<sup>96</sup>

This provision overlaps with the common law presumption of *mens rea* in all offences.<sup>97</sup> However, the presumption of *mens rea* can be rebutted.<sup>98</sup> In the High Court case of *He Kaw Teh v R* ('*He Kaw Teh*'),<sup>99</sup> Gibbs CJ (with whom Mason J agreed<sup>100</sup>) outlined four factors that need to be assessed to determine whether the presumption is rebutted: (1) the language of the section creating the offence; (2) the subject matter of the statute; (3) the consequences for the community of an offence; and (4) the potential consequences for an accused if convicted.<sup>101</sup>

In examining the language of the section describing the offence, Dawson J in *He Kaw Teh* discussed the use of the words 'knowingly' and 'wilfully' as indicating a subjective intent element.<sup>102</sup> That such terms are not present in s 178(2) suggests that it is a strict liability offence. However, Dawson J also stated the absence of such words is not determinative.<sup>103</sup>

In the same case, Brennan J considered the subject matter of the statute. His Honour stated, '[t]he purpose of the statute is the surest guide of the legislature's intention as to the mental state to be implied.'<sup>104</sup> On this point, the *Patents Act* primarily concerns an administrative regime to incentivise innovation,<sup>105</sup> not to create criminal liability. On this basis, it might be argued that it was not the intention of the legislature to criminalise all acts of false patent marking, but rather to capture only those acts that intentionally extend the patent monopoly beyond permissible limits. This suggests that there should be a *mens rea* element to the offence. However, in discussing the subject matter of

<sup>95</sup> *Macquarie Concise Dictionary* (Macquarie Dictionary Publishers, Online 6<sup>th</sup> ed, 2013).

<sup>96</sup> *Criminal Code Act 1995* (Cth) sch 1, 5.6(1).

<sup>97</sup> *He Kaw Teh v R* (1985) 157 CLR 523, 528 (Gibbs CJ), 546 (Mason J), 565–6 (Brennan J), 594 (Dawson J).

<sup>98</sup> *Ibid* 528–30.

<sup>99</sup> *Ibid*.

<sup>100</sup> *Ibid* 546.

<sup>101</sup> *Ibid* 528. In various ways, each of the remaining judgments in this case engaged with these ideas, see, 546–563 (Wilson J), 563–590 (Brennan J), 590–604 (Dawson J).

<sup>102</sup> *Ibid* 594.

<sup>103</sup> *Ibid*.

<sup>104</sup> *Ibid* 576.

<sup>105</sup> Commonwealth, *Parliamentary Debates*, Senate, 29 May 1990, 1271 (Robert Ray); Commonwealth, *Parliamentary Debates*, House of Representatives, 10 October 1990, 2565–7 (Simon Crean).

the statute in issue in *He Kaw Teh*, Gibbs CJ approved of a passage from the classic strict liability case of *Sherras v De Rutzen*.<sup>106</sup> In that case, Wright J stated that the presumption of *mens rea* is displaced when the acts are ‘not criminal in any real sense, but are acts which in the public interest are prohibited under penalty’.<sup>107</sup> False patent marking generally fits that description, there is no real possibility of physical distress, and is not within the common understanding of what a criminal act is. As a result, this line of reasoning, quite persuasively, tends to favour a strict liability interpretation.

In terms of consequences to the community arising due to the offence, some market participants may be confused about patent protection, thereby causing them to not enter a market, delay entering a market, or spend money clarifying that no patent protects a product. Alternatively, a consumer may buy a product believing a falsely marked product includes technology not available in other products. On this basis, the offence is effectively a market-based one, which, as a general rule do not normally require a fault element.<sup>108</sup>

With regards to the consequences for the accused, in *He Kaw Teh*, Gibbs CJ indicated that the more serious the penalties the less likely Parliament intended that a person who had no intention or knowledge of doing anything wrong should be found guilty.<sup>109</sup> In the spectrum of penalties, \$10,800 is not severe, especially when compared to other market offences such as false or misleading representations about goods,<sup>110</sup> which carry pecuniary penalties of up to \$1,100,000 for body corporates and up to \$220,000 for persons that are not a body corporates.<sup>111</sup> Moreover, false patent marking it is not an indictable offence, and there is no chance of gaol time.<sup>112</sup> Similarly, offenders will not suffer the type of stigma that, as Gibbs CJ noted, can occur with other criminal offences.<sup>113</sup> There is also no real problem of a ‘luckless’ victim in false patent marking (that is, one who accidentally marks a product as patented);<sup>114</sup> patent rights holders either write the patent claims or acquire them knowing what has been specified.

Looking more broadly to statutes with similar subject matter and language, the phrase ‘false or misleading representation’ in consumer law has been interpreted to include representations contrary to fact, meaning that such a representation can be made even if the representor does not know their representation is false.<sup>115</sup> Furthermore, although a strict liability regime raises the prospect of

<sup>106</sup> *Sherras v De Rutzen* [1985] 1 QB 918; *He Kaw Teh v R* (1985) 157 CLR 523, 530.

<sup>107</sup> *Ibid* 922.

<sup>108</sup> Under the *ACL* there are provisions for criminal prosecutions but these are reserved for the ‘most blatant, harmful or dishonest conduct’, see Stephen G Corones, *The Australian Consumer Law* (Lawbook, 2<sup>nd</sup> ed, 2013) 523.

<sup>109</sup> *He Kaw Teh v R* (1985) 157 CLR 523, 530.

<sup>110</sup> *Competition and Consumer Act 2010* (Cth) sch 2, 29(1)(a), s 151(1)(a).

<sup>111</sup> *Ibid* sch 2, ss 224, 151(1), 155(1).

<sup>112</sup> *He Kaw Teh v R* (1985) 157 CLR 523, 576.

<sup>113</sup> *Ibid* 530.

<sup>114</sup> *Ibid* 530.

<sup>115</sup> *Competition and Consumer Act 2010* (Cth) sch 2, s 29(1)(a); *Given v C V Holland (Holdings) Pty Ltd* (1977) 29 FLR 212, 217 (interpreting *Trade Practices Act 1974* (Cth) s 53, the precursor to s 29).

liability for wholesalers, retailers and second-hand sellers of falsely marked goods, the defence of honest and reasonable mistake of fact applies.<sup>116</sup> In many scenarios it seems clear that retailers, wholesalers and second-hand sellers would generally attract this defence. It would probably also apply to patent rights holders who, after reading patent claims, honestly and reasonably apply patent marks. On balance, then, considering that the fine for false patent marking is quite low, that it is market-based offence, that there is interest in preventing false patent marking under penalty and that there is no clear intention from the legislature to require a mental element, it seems likely that false patent marking is a strict liability offence.

Despite the conclusion that false patent marking is likely a strict liability offence, in light of *BP Lubricants*, it is necessary to consider the consequence of a *mens rea* requirement on pleadings. As illustrated by US filings post-*BP Lubricants*, if pleadings are required with exacting particulars of knowledge that the marks were false, then false patent marking can become very difficult to establish. If s 178(2) is interpreted to be a strict liability offence, then a respondent's state of mind is irrelevant and regular pleading requirements apply.<sup>117</sup> However, if it must be proved that a respondent knew that what they marked was false, then that is classified as fraud and a higher level of pleadings apply in Australia.<sup>118</sup>

Federal Court Rule 16.43 requires that when a 'condition of the mind' (which includes knowledge and fraud<sup>119</sup>) is pleaded, the particulars of the facts upon which the party relies must be stated. Moreover, there is well established authority for the proposition that pleadings of fraud must be made 'specifically and with particularity' and 'the pleading must make plain that the person made the statement knew it to be false or was careless as to its truth or falsity'.<sup>120</sup> On this basis, a scenario akin to *BP Lubricants* may arise. If a *mens rea* examination is required in Australia and it must be proved that the representor knew the mark was false, then the facts proving this element must be pled with specificity and particularity. Consequently, although the *actus reus* elements of false patent marking may be easy to identify, articulating sufficient particulars of how a company knew or a person knew that the marking was false, without evidence of what decisions were made when the product was marked, would be difficult.

In light of the pre-AIA *qui tam* provision in the US, it is also necessary to consider the standing requirements in Australia. When false patent marking was introduced into the *Patents Act 1952*

<sup>116</sup> *Proudman v Dayman* (1941) 67 CLR 536, 540; *Jiminez v R* (1992) 173 CLR 572, 581–3; *Criminal Code Act 1995* (Cth) s 6.1(1)(b), 9.2.

<sup>117</sup> Federal Court Rules 2011 (Cth) pt 16.

<sup>118</sup> *Ibid* rr 16.41–3.

<sup>119</sup> *Ibid* r 16.43(3).

<sup>120</sup> *Forrest v Australian Securities and Investments Commission* (2012) 291 ALR 399, 407; *Wallingford v Mutual Society* (1880) 5 AC 685, 697, 701, 704, 709; *Banque Commerciale SA, En Liquidation v Akhill Holdings Ltd* (1990) 169 CLR 279, 285.

(Cth), it was based on the false marking provision in the *Designs Act 1906* (Cth).<sup>121</sup> A notable addition to the designs law provision was that before a false patent marking prosecution could be commenced, consent from the Attorney General was required.<sup>122</sup> Although consent is now required from ‘the Minister’,<sup>123</sup> the reason why permission has always been a feature of the Australian action is unknown and extrinsic materials do not shed light on the matter.

Related to this standing issue, an oft forgotten, but important feature of criminal provisions, is that they can be privately prosecuted. Section 13 of the *Crimes Act 1914* (Cth) states that any indictable or summary offence can be prosecuted by ‘anyone’.<sup>124</sup> Indeed, technically all criminal Australian prosecutions are private.<sup>125</sup> Private prosecutions have been described in a modern UK case as an important constitutional safeguard from executive partiality.<sup>126</sup> It therefore seems reasonable to assume that false patent marking was designed to be prosecuted by the government and private parties, otherwise there would be no need for the Minister’s consent. It is plausible to suggest that the reason false patent marking has not been litigated in Australia is that consent has been refused. However, communications with IP Australia indicate this is not the case: there is no record that consent from the Minister has been requested.<sup>127</sup> As a result, the consent mechanism appears to be an unnecessary bureaucratic requirement.

The change in interpretation of the false patent marking penalty in *Forest Group* warrants a closer look at the Australian penalty as well. Section 178(2) states that ‘[a] person must not falsely represent that an article sold by him or her is patented in Australia’,<sup>128</sup> and stipulates that the penalty for this for is 60 penalty units (\$10,800).<sup>129</sup> Despite this, whether the Australian false patent marking penalty applies to each individual article is not clear. The section refers to ‘an article’, as opposed to a product line or a time period, and as such it is possible to argue that the penalty applies to every falsely marked article. However, the Australian penalty is not as explicit as the US penalty, which prohibits false marking of ‘any unpatented article’ with a penalty of up to ‘\$500 for every such offense’.<sup>130</sup>

<sup>121</sup> *Designs Act 1906* (Cth) s 45; *Report of the Committee Appointed by the Attorney-General of the Commonwealth to Consider What Alterations are Desirable in the Patent Law of the Commonwealth*, House of Representatives (1952) 42.

<sup>122</sup> *Patents Act 1952* (Cth) s 174.

<sup>123</sup> *Ibid* s 174, as amended by *Administrative Changes (Consequential Provisions) Act 1976* (Cth) s 3.

<sup>124</sup> *Crimes Act 1914* (Cth) s 13.

<sup>125</sup> Prosecution Policy of the Commonwealth (2008) 13–5.

<sup>126</sup> *Gouriet v Union of Post Office Workers* (1977) 3 All ER 70, 79. It should also be noted that with respect to all private prosecutions, federal prosecutors have power to take over the prosecution, and if required, discontinue them (Prosecution policy of the Commonwealth (2008) 14–5).

<sup>127</sup> Email from Nathan Madsen, Senior Examiner of Patents, IP Australia, to Johnathon Liddicoat, 30 April 2013.

<sup>128</sup> *Patents Act 1990* (Cth) s 178(2) (emphasis added).

<sup>129</sup> *Crimes Act 1914* (Cth) s 4AA.

<sup>130</sup> 35 USC § 292 (b) (emphasis added).

Apart from the explicit language in § 292(b), the Court in *Forest Group* had three other reasons to find that the penalty applied to every article: (1) there was no language in the statute to allow time-based or product-run calculation of fines;<sup>131</sup> (2) the provision gave leeway for fines up to \$500 per article;<sup>132</sup> and (3) a fine of \$500 overall would render the provision useless.<sup>133</sup> The Australian provision does not explicitly contain language indicating time-based or product-run calculations of fines, nor is there language to indicate a fine of ‘up to’ 60 penalty units. However, what appears to be a compelling argument against a *Forest Group* style approach is that if the penalty is calculated on a ‘per article basis’ a company found guilty of falsely marking 10,000 articles, a relatively modest number, would be penalised \$108 million. This is an incongruous amount and likely to render the interpretation of the penalty to a fine for each different type of product that is falsely marked, or possibly each production run.

It is also relevant to note that although \$10,800 is substantially more than \$500, from a private litigant’s point of view, it is low. This is pertinent considering that it is not immediately apparent to all private litigants that they can prosecute a criminal offence, and it would cost many times more to mount all the interpretation hurdles (discussed here) and prosecute the provision. Moreover, even if a prosecution is successful, the penalty goes to the government. The only potential benefit to the litigant is if the respondent is a competitor. It therefore seems plausible to suggest that the reason the Ministers’ consent has not been requested is that no private litigant has sufficient incentive to prosecute the provision.

#### B. False Patent Marking Liability under the ACL?

There are three provisions under the ACL that could create liability for false patent marking: ss 18, 29 and 31. When any of these provisions are litigated, the context of the facts can be crucial. However, while the context of a false patent marking may determine the outcome of a case, this analysis will consider what inferences can be drawn from a patent mark by itself.

Section 18 states, ‘[a] person must not ... engage in conduct that is misleading or deceptive or is likely to mislead or deceive’.<sup>134</sup> Misleading and deceptive conduct under s 18 will be found when, objectively viewed, the conduct complained of is capable of leading a person into error.<sup>135</sup> Section 18 has previously been found to create liability for false patent marking. In *Elconnex Pty Ltd v Gerard Industries* (*‘Elconnex’*)<sup>136</sup> the respondent marked products with ‘pat pending’ when no patent application was ever lodged. The respondent did ‘not seriously contend’ that they had not

<sup>131</sup> *Forest Group Inc v Bon Tool Company*, 590 F 3d 1295, 1302 (Fed Cir, 2009).

<sup>132</sup> *Ibid* 1304.

<sup>133</sup> *Ibid* 1303.

<sup>134</sup> *Competition and Consumer Act 2010* (Cth) sch 2, s 18.

<sup>135</sup> *Parkdale Custom Built Furniture Pty Ltd v Puxu Pty Ltd* (1982) 149 CLR 191, 198.

<sup>136</sup> *Elconnex Pty Ltd v Gerard Industries* (1991) 32 FCR 491.

contravened s 52 of the *Trade Practices Act* (the precursor to s 18).<sup>137</sup> Burchett J stated that the phrase ‘patent pending’, in the context of misleading and deceptive conduct, ‘is likely to produce the impression that it has made an invention, or acquired the benefit of an invention for which a patent will issue, or at least is expected to issue’.<sup>138</sup>

Section 29 is drafted to capture false or misleading representations about goods or services,<sup>139</sup> and s 33 is drafted to capture misleading conduct as to the nature of goods.<sup>140</sup> It is necessary to consider ss 29 and 33 because they offer additional remedies compared to s 18 (and s 178(2) under the *Patents Act*). The primary difference is that, under ss 29 and 33, litigants can pursue pecuniary penalties of up to \$1,100,000 for body corporates and up to \$220,000 for persons that are not body corporates.<sup>141</sup>

There are two subsections of s 29 that may be infringed by false patent marking: s 29(1)(a) which captures false or misleading representations ‘that goods are of a particular standard, quality, value, grade, composition, style or model or have had a particular history or particular previous use’;<sup>142</sup> and s 29(1)(g) which captures false or misleading representations ‘that goods or services have sponsorship, approval, performance characteristics, accessories, uses or benefits’.<sup>143</sup> Under s 29(1)(a) it could be argued that a false patent mark is a false or misleading representation of a particular standard or quality.<sup>144</sup> Under s 29(1)(g) it could be argued that false patent marking is a false or misleading representation that the marker has approval to use the patent mark.<sup>145</sup>

To determine whether false patent marking falls under s 29(1)(a), there are two words that must be characterised: ‘standard’ and ‘quality’.<sup>146</sup> ‘Standard’ has been interpreted to mean ‘a definite degree of any quality viewed as a prescribed object of endeavour’.<sup>147</sup> ‘Quality’ has been interpreted broadly to extend ‘beyond just the degree or grade of excellence which a thing can be said on physical examination to possess in comparison with others of a similar kind, and includes the virtues, attributes, properties and special features of the thing.’<sup>148</sup> Clearly, although there is overlap between these two definitions, ‘standard’ appears to refer to an application of an object and, ‘quality’ to an object’s stationary, non-applied physical characteristics. It is generally well known that patents are granted for innovative inventions and that they carry an ability to exclude others from using the invention. Consequently, two arguments can be raised under the term quality in s 29(1)(a): (1) that

<sup>137</sup> Ibid 494.

<sup>138</sup> Ibid.

<sup>139</sup> *Competition and Consumer Act 2010* (Cth) sch 2, s 29(1)(a).

<sup>140</sup> Ibid s 33.

<sup>141</sup> *Competition and Consumer Act 2010* (Cth) sch 2, ss 224, 151(1).

<sup>142</sup> Ibid s 29(1)(a).

<sup>143</sup> Ibid s 29(1)(g).

<sup>144</sup> Ibid s 29(1)(a).

<sup>145</sup> Ibid s 29(1)(g).

<sup>146</sup> *Gardam v George Wills & Co Ltd* (1988) 82 ALR 415, 423–4.

<sup>147</sup> Ibid.

<sup>148</sup> *Ducret v Chaudhary’s Oriental Carpet Palace Pty Ltd* (1987) 16 FCR 562, 577.

false patent marks falsely indicate an advanced technology is included in the item; and (2) that false patent marks falsely indicate that a technology does not exist in other competing products. However, for either argument to succeed it would have to be accepted that bona fide patent marks indicate an advanced technology is included in an item or that they indicate technology does not exist in other competing products; otherwise a false mark cannot be deceptive.

In reference to the first argument, that patent marks indicate advanced technology, one commentator has reasoned:

A patent confers no government endorsement as to the quality of the invention ... A patent merely recognizes that an invention is new, useful, non-obvious, and disclosed in compliance with a number of statutory requirements.<sup>149</sup>

This means that it is difficult to assign any quality or standard-based meaning to a patent mark, because a patent does not, by itself, indicate an attribute, property, or special feature. A patent may disclose a new way of making an old thing, or a new, inventive but ultimately inferior way to achieve an outcome already achieved.

With regard to the second argument under s 29(1)(a), that patent marks indicate a technology is not used in other products, although the property right enables a patent holder to exclude others from the technology, it does not mean any exclusions have actually occurred or that everyone is excluded. For example, empirical research indicates many holders of gene patents in Australia do not enforce them,<sup>150</sup> and that patented technology may be available through patent pools such as that used in 3G technology, or DVDs.<sup>151</sup> Consequently, there appear to be reasonable arguments that false patent marking, by itself, does not contravene s 29(1)(a).

Under s 29(1)(g), arguing that false patent marking is a false or misleading representation that the marker has approval to use the patent mark, is not compelling either. In the default judgment of *ACCC v Marksun Australia Pty Ltd ('Marksun')*,<sup>152</sup> the Court held that using the logo, 'Made in Australia', when a party is not approved to use the logo, is a misleading representation.<sup>153</sup> By analogy, it could be argued that a false patent mark could be a misrepresentation because without a patent it is an offence under the *Patents Act* to mark an article as patented. However, the approval process is quite different for using the 'Made in Australia' logo, and using a patent mark. The

<sup>149</sup> Craig Deutsch, 'Restoring Truth: An Argument to Remove the Qui Tam Provision from the false Marking Statute of the Patent Act' (2010) 11 *Minnesota Journal of Law Science and Technology* 829, 843.

<sup>150</sup> Dianne Nicol and John Liddicoat, 'Do Patents Impede the Provision of Genetic Tests in Australia?' (2013) 37 (3) *Australian Health Review* 281.

<sup>151</sup> David Serfino, 'Survey of Patent Pools Demonstrates Variety of Purposes and Management Structure' (4 June 2007) *Knowledge Ecology International* <<http://goo.gl/QMs76Z>>; Ted J Ebersole, Marvin C Guthrie & Jorge A Goldstein, 'Patent Pools and Standard Setting in Diagnostic Genetics' (2005) 23 *Nature Biotechnology* 937, 937.

<sup>152</sup> *ACCC v Marksun Australia Pty Ltd* [2011] FCA 695 (23 June 2011).

<sup>153</sup> *Ibid* [77]–[81].

Macquarie Dictionary defines ‘approval’ to mean ‘approbation’, ‘sanction’ or ‘official permission’,<sup>154</sup> all which imply that some sort of positive act is taken to give approval. Thus, there is a strong argument that false patent marking is not a misrepresentation of approval, because patent marking is not positively and specifically granted by IP Australia.

An alternative action for false patent marking is ‘misleading conduct as to the nature of goods’ under s 33 of the *ACL*. This cause of action has its origins in 10bis of the *Paris Convention for the Protection of Industrial Property*;<sup>155</sup> it was designed to supplement IP protection.<sup>156</sup> The section states:

a person must not ... engage in conduct that is liable to mislead the public, as to the nature, the manufacturing process, the characteristics, the suitability for their purpose or the quantity of any goods.<sup>157</sup>

It could be argued that false patent marking misleads with regard to the nature, or characteristics of goods. Previously, successful actions under this section, or its predecessor,<sup>158</sup> have focussed on the characteristics of goods. The cases include: falsely marking a bicycle helmet stating it met certain standards, when it had not actually been tested;<sup>159</sup> and falsely marking a children’s car booster seat stating that it complied with a certain standard when it did not.<sup>160</sup> However, unlike these actions, false patent marks do not indicate a physical characteristic. In the US case, *Sheldon Friedlich Marketing Corporation v Carol Wright Sales Inc* (*‘Sheldon Friedlich’*)<sup>161</sup> the Court, under a similar provision, held that advertising stating a patent had been applied for, did not refer to a quality or characteristic of the product.<sup>162</sup> Since a patent mark only indicates a property right, it is difficult to see how false patent marking would violate this section.

In terms of the comparison between US and Australian law conducted in this chapter, ss 29 and 33 do not offer clear liability and, although s 18 offers clear liability, the remedies are very different to those in the US prior to the *AIA*. Successful applications under s 18 attract a variety of remedies,<sup>163</sup> the most relevant of which to a false patent marking applicant would be injunctions,<sup>164</sup> damages,<sup>165</sup> and compensatory orders.<sup>166</sup> Clearly injunctions are relevant to competitors, but most false patent marking cases in the US were not litigated by competitors, rather, they were litigated by ‘professional

<sup>154</sup> *Macquarie Concise Dictionary* (Macquarie Dictionary Publishers, Online 6<sup>th</sup> ed, 2013).

<sup>155</sup> Stephen G Corones, *The Australian Consumer Law* (Lawbook, 2<sup>nd</sup> ed, 2013) 304–5.

<sup>156</sup> *Ibid* 304.

<sup>157</sup> *Competition and Consumer Act 2010* (Cth) sch 2, s 33.

<sup>158</sup> *Trade Practices Act 1974* (Cth) s 55.

<sup>159</sup> *Lennox v Megray Pty Ltd* (1986) 6 IPR 543, 543.

<sup>160</sup> *Temperley v Playground Supplies Pty Ltd* (1980) ATPR ¶140–164, 42 296.

<sup>161</sup> *Sheldon Friedlich Marketing Corporation v Carol Wright Sales Inc*, 219 USPQ 883 (SD NY, 1983).

<sup>162</sup> *Ibid* 890.

<sup>163</sup> Stephen G Corones, *The Australian Consumer Law* (Lawbook, 2<sup>nd</sup> ed, 2013) 132–3.

<sup>164</sup> *Competition and Consumer Act 2010* (Cth) sch 2, s 232.

<sup>165</sup> *Ibid* s 236.

<sup>166</sup> *Ibid* s 237.



relators'. Moreover, between October 2011 and May 2013 (post-A/A) only one false patent marking case demonstrated a proven competitive injury,<sup>167</sup> indicating that damages and compensatory orders (relief synonymous with competitive injury) are not suffered or generally not sufficient to attract litigation in the US.

Section 178(2) of the *Patents Act* probably provides broad liability (including all expired patents) and probably operates via a strict liability mechanism. However, between the lack of clarity in the liability mechanism and the limited nature of the financial relief (probably limited to \$10,800, all of which goes to the government), there would appear to be insufficient incentive for a private litigant to commence a prosecution.

One inference that can be drawn from the comparison of Australian and US law then is that the absence of litigation does not provide definitive guidance on whether false patent marking is present in Australia or not. Only if false patent marking liability was easily established and offered financial incentives for private litigants could this outcome have been logically drawn. Despite this, the availability of broad liability and injunctions under s 18 does suggest that either false patent marking is not present or is not causing harm to competitive markets. However, before this finding can be concluded upon, a closer examination of the harms caused by false patent marking is required.

### III. Harms and Reform

#### A. What is the Harm?

Before embarking on the exercise of determining the harm caused by false patent marking, it is pertinent to note that there is little empirical data on its effect, and no authoritative evidence.<sup>168</sup> The only empirical data available is from the US case of *Sheldon Friedlich*. In that case, market survey evidence was adduced showing that when the phrase 'patent applied for' was used in advertisements for air coolers, the advertisements were less successful.<sup>169</sup> However, the reliability of this data is questionable. The judgment stressed that the survey evidence included other variables than just the mark, such as the colour of the air cooler.<sup>170</sup> Moreover, because the survey methodology was not available to the Court, it is questionable whether this evidence has any value at all.<sup>171</sup>

<sup>167</sup> *Big Pond Products LLC v Team Marine USA LLC* (ND Fla, No 4:11cv511-RH/CAS, 12 July 2012).

<sup>168</sup> See also, Bonnie Grant, 'Deficiencies and Proposed Recommendations to the False Marking Statute: Controlling Use of the term "Patent Pending"' (2004) 12 *Journal of Intellectual Property Law* 283, 291.

<sup>169</sup> *Sheldon Friedlich Marketing Corporation v Carol Wright Sales Inc*, 219 USPQ 883, 886–7 (SD NY, 1983).

<sup>170</sup> *Ibid* 890.

<sup>171</sup> *Ibid*.

Typically, when commentators discuss harms caused by false patent marking they focus on the harm to competition and to consumers.<sup>172</sup> The classic conception of competition-based harm caused by false patent marking has been summarised by Brinkema J, the first instance judge in *Solo Cup*, when her Honour stated that an invention marked as patented is in effect a ‘no trespassing sign’.<sup>173</sup> In the context of patents, this summary suggests it is a warning, notifying the world that if technical aspects of the product are copied, infringement may occur. From a competition point of view, then, a greater market share could be obtained because competitors may believe the product is protected by a patent. Alternatively, a company may choose not to improve a product due to perceived transaction costs in negotiating a licence, or because it is believed that the invention is too difficult to invent around.<sup>174</sup> In short, when false patent marking occurs, an illusory patent monopoly may arise due to the concomitant threat of infringement.

One commentator, when discussing harms caused by false patent marking, has described a theoretical scenario in which a pharmaceutical company falsely marks its drugs, which in turn deters other companies from competing with them.<sup>175</sup> However, this analysis may be a little simplistic. The reality is that effectively all pharmaceuticals are, or have been patented.<sup>176</sup> Moreover, a company does not simply consider making a generic pharmaceutical, see that the original drug is marked as patented and abandon the project. Such a company knows beforehand that there is likely to be patent related issues and through a due diligence process will identify the dimensions of the protection. Thus, for a generic drug company in the situation of valid patent protection, it will be a matter of contesting the patent, working around the patent, or waiting for it to expire. Alternatively, if a product is falsely marked, this will be discovered by the generic company during due diligence. The only harm, in this situation, would be the small resource loss incurred by the generic company in having to work out the mark is false.

Although this drug scenario suggests that false patent marking may have limited, negative competitive effects, in other markets and circumstances, harm might be more pronounced. If innovators are not patent savvy, do not normally undertake freedom-to-operate analyses, or do not have sufficient resources to spend on patent searching or due diligence, false patent marking may

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<sup>172</sup> See, eg, Bonnie Grant, ‘Deficiencies and Proposed Recommendations to the False Marking Statute: Controlling Use of the term “Patent Pending”’ (2004) 12 *Journal of Intellectual Property Law* 283, 289–92; Richard A Crudo, ‘A Patently Public Concern: Using Public Nuisance Law to Fix the False Patent Marking Statute After the Leahy-Smith America Invents Act’ (2012) 80 *George Washington Law Review* 568, 576–9; Thomas F Cotter, ‘Optimal Fines for False Patent Marking’ (2010) 17 *Michigan Telecommunications and Technology Law Review* 181, 185–8.

<sup>173</sup> *Pequignot v Solo Cup*, 540 F Supp 2d 649, 654 (ED Va, 2008).

<sup>174</sup> For example, Christopher G Granaghan, ‘Off the Mark: Fixing the False Marking Statute’ (2011) 89 *Texas Law Review* 477, 480–1.

<sup>175</sup> Richard A Crudo, ‘A Patently Public Concern: Using Public Nuisance Law to Fix the False Patent Marking Statute After the Leahy-Smith America Invents Act’ (2012) 80 *George Washington Law Review* 568, 578.

<sup>176</sup> See, Christie et al, ‘Patents Associated with High-Cost Drugs in Australia’ (2013) 8 *PLoS One* 4 <<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0060812>>.

foreclose a market and/or stifle innovation. This class of innovators may include cash-lean companies or university-based researchers. Indeed, for an organisation that does not routinely conduct patent due diligence analyses, false patent marking would require them to spend thousands on conducting a patent clearance analysis which it would otherwise not need to do.<sup>177</sup> While data does not exist showing the utility of false marks, the number of companies who have engaged with it in the US, does tend to indicate that it has some value. It may be in these classes of innovators that it has more noticeable competitive effects.

Another possible advantage of false patent marking may be the short-term advantage created while competitors complete their freedom-to-operate or patent clearance analyses. Since the passage of the AIA, the case of *Big Pond Products LLC v Team Marine USA LLC* ('Big Pond')<sup>178</sup> has proceeded, in part, to a default judgment. The judgment elucidated a clear benefit to the false patent marker.<sup>179</sup> Unopposed evidence led the Court to find that false patent marking caused the plaintiff to delay the launch of their patented product by five weeks. In compensation for this delay, the plaintiff was awarded damages of almost US\$1 million.<sup>180</sup>

From a consumer point of view it has been argued that because a patent is only awarded if technology contains an inventive step,<sup>181</sup> it could indicate that there is a technological advance in an article that is unique to it.<sup>182</sup> This may influence a consumer into choosing one product over another based on incorrect information, and possibly paying more for it.<sup>183</sup> As discussed by Bonnie Grant, this causes two harms, one consumer-based and the other economic: the customer is deceived into thinking they have obtained a superior product, and a competitor is otherwise deprived of a sale.<sup>184</sup> However, whether consumers actually notice patent marks is an important question. It is possible that the consumer-based effects arise so infrequently that they are negligible. It is also possible that, in some markets, false patent marking may actually harm the marker. Indeed, as noted above, the results of the 'quasi' study in *Sheldon Friedlich* suggest that patent marking can decrease sales. Supposing that the reduction in sales in *Sheldon Friedlich* was due to patent marking, there are a number of reasons why this may have occurred. For example, it is well known that repairing and maintaining cutting edge technology often carries with it expensive bills. Similarly, with patents often

<sup>177</sup> McKernan et al, 'DREAMing of a patent-free human genome for clinical sequencing' (2013) 31 *Nature Biotechnology* 884, 884.

<sup>178</sup> *Big Pond Products LLC v Team Marine USA LLC* (ND Fla, No 4:11cv511-RH/CAS, 12 July 2012) slip op.

<sup>179</sup> *Ibid* slip op, 3.

<sup>180</sup> *Ibid* slip op, 4.

<sup>181</sup> *Patents Act 1990* (Cth) s 18(1)(b)(ii).

<sup>182</sup> Also discussed in Elizabeth Winston, 'The Flawed Nature of the False Marking Statute' (2009) 77 *Tennessee Law Review* 111, 133; Bonnie Grant, 'Deficiencies and Proposed Recommendations to the False Marking Statute: Controlling Use of the term "Patent Pending"' (2004) 12 *Journal of Intellectual Property Law* 283, 289.

<sup>183</sup> *Ibid* 133.

<sup>184</sup> Bonnie Grant, 'Deficiencies and Proposed Recommendations to the False Marking Statute: Controlling Use of the term "Patent Pending"' (2004) 12 *Journal of Intellectual Property Law* 283, 289.

come higher prices. Consequently, it is possible that the reduction in sales in *Sheldon Friedlich* were due to consumers believing that the product was too expensive or contained technology that would be difficult to maintain.

Whether the economic and consumer-based effects of false patent marking actually arise and if so, how subversive they are, is speculative. One certainty is that articles once validly marked and sold pursuant to a patent that has now expired do exist in the market. It is short-sighted to suggest that these articles should be recalled and the mark removed, because all the products are unlikely to be returned and the cost would likely outweigh any gains. This means there will always be articles in markets that are marked as patented when they do not actually have patent protection because it has expired.

The effect of false patent marking on consumers and markets is certainly an important consideration. However, there is a final aspect of patent marking that is commonly overlooked: the integrity of the patent system. The purpose of the patent system is to incentivise technological innovation by allowing applicants to obtain exclusive rights in inventions. A logical but unsubstantiated assessment of patent marking is that it is probably the most common activity undertaken to communicate patent rights. While there is no data on the incidence of people accessing patent specifications, and it is expected that few do, there is nevertheless value in ensuring that patent marks on articles are accurate. Allowing parties to mark products as patented when no patent has ever existed reduces trust in the patent system.

Overall, the analysis of harms in this part allows a few conclusions to be drawn. Significant competitive harm is only likely to be experienced by cash lean or patent inexperienced innovators. This reduces the concern of false patent marking, and may also explain the low level of litigation. However, false patent marking may still affect consumers, reduce trust in the patent system and cause inefficiencies that patent savvy innovators may encounter. Furthermore, with the exception of expired patents, there is no good reason why false patent marking should exist and therefore no reason why parties should be affected by it. As such, Australian laws prohibiting false patent marking need to be reviewed and, where necessary, reformed to reflect a modern understanding of false patent marking.

The following review and suggestions for reform builds upon the foregoing comparative analysis of false patent marking laws. Given that data on Australian false patent marking does not indicate it is having significant negative effects, the focus of the review is to provide a rational basis for fines, and improve enforcement of the current laws.

### B. Appropriate Fines?

An economic perspective on setting optimal false patent marking fines has recently been provided by Professor Thomas Cotter.<sup>185</sup> As Cotter mentions, the appropriate fine for false patent marking has received surprisingly little attention.<sup>186</sup> Cotter accepts that negative competition and consumer outcomes can arise from false patent marking, but states that only a nominal fine should be imposed in instances where harms are unlikely to have occurred.<sup>187</sup> He stresses that with regard to penalties, a balance should be reached between over deterrence and under deterrence. If penalties are excessive then firms may stop patent marking, making it more difficult for other innovators to identify patent rights, and reducing the patent holder's ability to recover financial relief. On the other hand, if fines are too low then there is little incentive to mark correctly or instigate false patent marking litigation.<sup>188</sup>

Cotter recommends looking to competition law and consumer law to identify optimal fines.<sup>189</sup> In particular, he argues the highest fines should be awarded for instances in which significant consumer or competition harm has been observed and in which the culpability of the marker is highest,<sup>190</sup> the objective being to disgorge any gains made by false patent marking.<sup>191</sup> Such an approach would therefore include a range of considerations, such as whether the false patent marking: stifled innovation or was likely to stifle innovation; increased sales or was likely to increase sales; prevented competition or was likely to prevent competition; or delayed or was likely to delay development of products. Other factors include: how many items were falsely marked; how long for; whether the mark could be easily removed; and whether a patent number was included in the mark.<sup>192</sup> Since the primary effects of false patent marking relate to competition and consumer harm, this approach is sensible. It also serves as a much more logical basis to decide fines, rather than the vacuum that currently exists.

### C. Are Australia's Laws Sufficient?

The analysis above indicates that only s 178(2) of the *Patents Act* and s 18 of the *ACL* will create liability for false patent marking. This means that, broadly speaking, the approach to enforcement endorsed by Cotter exists in Australia. That is, Australian law provides a nominal fine through s 178(2) and the possibility of much higher fines, proportionate to injuries caused to consumers or

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<sup>185</sup> Thomas F Cotter, 'Optimal Fines for False Patent Marking' (2010) 17 *Michigan Telecommunications and Technology Law Review* 181.

<sup>186</sup> Ibid 188.

<sup>187</sup> Ibid 195–6.

<sup>188</sup> Ibid 190–1; *Patents Act 1990* (Cth) s 123.

<sup>189</sup> Thomas F Cotter, 'Optimal Fines for False Patent Marking' (2010) 17 *Michigan Telecommunications and Technology Law Review* 181, 190–2.

<sup>190</sup> Ibid 191–2.

<sup>191</sup> Ibid.

<sup>192</sup> For a more in depth review, see ibid 189–98.

competitors, through s 18. Whilst these basal aspects are complied with, a range of problems still exists with the regime. These problems are identified in this section and some minor legislative amendments recommended. However, in the absence of empirical data showing significant negative effects of false patent marking, major amendments that would see Australian false patent marking provisions comply with what Cotter describes as an 'optimal' system, are not currently required.

The first two problems with Australian false patent marking laws are the lack of clarity on the penalty and mental state requirement in s 178(2). The penalty in s 178(2) does not create a great incentive for private prosecutors and this incentive is only reduced with the lack of clarity. This is exemplified in *Elconnex* in which the applicant did not argue false patent marking under the *Patents Act 1952* (Cth), even though no patent had been applied for and the finding of misleading and deceptive conduct was clear.<sup>193</sup> To enhance the operation of the provision, a *mens rea* requirement should be specifically excluded due to the difficulty in proving intention and the onerous nature of the pleading requirements for fraud. The penalty should be clarified as a large nominal fine, consistent with Cotter's rationale. Additionally, the Minister's consent requirement should be removed because it is unnecessary.

In post-AIA US, it has been suggested that a public body should enforce false patent marking.<sup>194</sup> The governments in Australia and the US have always had the power to enforce these laws but have not done so. There are three main reasons why governments should enforce false patent marking. First, private parties may not have sufficient incentive to litigate because it is difficult for them to quantify harms they suffer.<sup>195</sup> Second, even if false patent marking causes no consumer or competitive harm, it still undermines trust in the patent system. Third, if it is known that the government is willing to litigate this may deter patent marking in the future. The Commonwealth Director of Public Prosecutions currently has jurisdiction under the *Director of Public Prosecutions Act 1983* (Cth),<sup>196</sup> but with such a broad portfolio it seems sensible to confer jurisdiction on the Australian Competition and Consumer Commission ('ACCC') which has expertise in the area and complements its s 18 ACL powers.

An additional feature of conferring jurisdiction on the ACCC would be to have it exercise its associated enforcement provisions from the *Competition and Consumer Act 2010* (Cth).<sup>197</sup> In particular the ACCC can require claims promoting goods to be substantiated.<sup>198</sup> In the circumstances of patent marking this attribute is highly desirable because it gives the ACCC a cheap and simple

<sup>193</sup> *Elconnex Pty Ltd v Gerard Industries* (1991) 32 FCR 491, 493–4.

<sup>194</sup> Nicholas W Stephens, 'From Forest Group to the America Invents Act: False Patent Marking Comes Full Circle' (2011–2012) 97 *Iowa Law Review* 1003, 1025–7.

<sup>195</sup> Christopher G Granaghan, 'Off the Mark: Fixing the False Marking Statute' (2011) 89 *Texas Law Review* 477, 496–8.

<sup>196</sup> *Director of Public Prosecutions Act 1983* (Cth) s 6(d).

<sup>197</sup> *Competition and Consumer Act 2010* (Cth) sch 2, pt 5-1.

<sup>198</sup> *Ibid* s 219.

mechanism to compel parties to inform the ACCC which patent(s) they believe apply to their product. For example, if a patent holder produces an article that states 'patented in Australia' on it, the ACCC can request the patent holder supply them with details of the patent that protects it.

Whether or not \$10,800 can be considered a nominal fine is open to debate. For a large commercial company with millions of dollars of intellectual property related expenditure it may seem minor, but for a start-up company, severe. On the other hand, the value to society of deterring false patent marking should not be overlooked. Companies should know what patent rights protect their products in each jurisdiction and mark accordingly. If there is confusion over whether a patent protects a product, it is of the patent holder's own making. Patent rights holders acquired or articulated the bounds of their own patents, and expiry dates are normally self-evident. Consequently, a nominal fine towards the higher end of what may be considered 'nominal' may be a good deterrent against false patent marking that is self-inflicted and should be easily avoided. Moreover, patent holders who mark products genuinely believing patent claims protect a product will be afforded the defence of honest and reasonable mistake of fact.

An additional problem with s 178(2) arises when patents expire. One amendment brought into effect by the AIA was that products marked with expired patent numbers that once protected the product no longer constitute false patent marking. One of the key reasons for this amendment was that using the patent number, a person could look up the US Patent Office's website and see the patent had expired.<sup>199</sup> Similarly, it provides a means to discern how the invention works.<sup>200</sup> It has been argued in the US that expiration dates on patents can sometimes be hard to calculate and therefore confuse the issue of expiry.<sup>201</sup> But in Australia expiry dates are much more obvious: the bibliographic data on IP Australia's *AusPat* website informs readers if a patent has expired, and if not lists the expiry date. As analysed above, articles marked with patents that previously protected them will likely constitute false patent marking in Australia under s 178(2). However, based on the fact there is limited evidence of false patent marking negatively effecting consumers or competitive markets, and no evidence at all that expired patents that once protected products do, Australia's false patent marking laws should be harmonised with those in the US on this point. This would exclude liability for false patent marking arising when an expired patent is applied to a product it once protected, but only in the circumstances the mark includes the Australian patent number. However, it should also be noted that if, consistent with the arguments in the previous chapter, virtual marking is permitted in Australia, then false patent marking should not arise if a virtual mark is used either.

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<sup>199</sup> Laura N Arneson, 'Defining Unpatented Article: Why Labeling Products with Expired Patent Numbers Should Not Be False Marking' (2011–2012) 95 *Minnesota Law Review* 650, 668–70.

<sup>200</sup> *Ibid* 670.

<sup>201</sup> *Clontech Laboratories Inc v Invitrogen Corp*, 406 F 3d 1347, 1367 (Fed Cir, 2005).

Throughout this chapter, the absence of empirical data on false patent marking in Australia has been highlighted. The amendments presented in this section are based on the best data available. If, in the future, empirical data shows that false patent marking has more pervasive effects on competitive markets or consumers, then it may be necessary to amend ss 29 or 33 of the *ACL* to create liability for false patent marking and thereby allow applicants to pursue pecuniary penalties. This would also broadly align with what Cotter would consider ‘optimal’. However, in the absence of such data these amendments, which are much more substantial, are not currently warranted.

## Conclusion

The comparison of US and Australian law conducted in this chapter, although not conclusive, generally indicates that false patent marking is not having a significant negative effect on Australian competitors or consumers. However, the analysis of Australian laws in light of the US boom-bust cycle, and what has been described as an optimal enforcement mechanism, does indicate a lack of clarity and other imperfections in the Australian provisions.

In the absence of empirical evidence demonstrating negative effects caused by false patent marking, modest amendments are recommended to improve the enforcement of the current system; namely: the penalty should be clarified as a large nominal fine; the ACCC should be given jurisdiction to enforce s 178(2) under the *Patents Act*; the requirement in s 178(2) that the Minister’s consent be obtained before prosecution can be commenced should be removed; and marking a product with a patent number that is now expired, but prior to expiry validly applied to the product, should not constitute false patent marking.



## Conclusion

The primary aim of this thesis has been to examine whether Australian patent law, in light of emergent issues, operates consistently with its economic justifications. Pursuant to this aim, emergent issues from diverse aspects of patent infringement law have been investigated in this context. At this stage, it is opportune to briefly review the analyses and conclusions reached in each chapter.

Chapter 1 examined standing to initiate patent infringement proceedings and was instigated by recent judicial decisions on the definition of 'exclusive licensee' in the *Patents Act 1990* (Cth) (the '*Patents Act*'). The analysis in this chapter demonstrated that the current law prohibits some parties who exclusively control elements of patent rights from beginning litigation, and that this outcome is actually inconsistent with the justifications for patent law. As a result, the chapter concluded by recommending that the definition of 'exclusive licensee' should be broadened to include licensees who exclusively control any sphere of patent rights.

Chapter 2 was prompted by recent technological advances in 3D printing. The chapter examined whether the creation or distribution of files that could instruct 3D printers to create physical objects could give rise to patent infringement. This issue is relevant because with the digital distribution of such files, there is concern that patentees may not be able to efficiently enforce their rights. Overall, the analysis in this chapter found no immediate fault in the operation of the law, because two secondary infringement causes of action are quite fitted to creating liability in these circumstances. As a result, no recommendations for law reform were made. However it is suggested that a watching brief be kept on this topic.

Chapter 3 considered recent US case law on 'divided performance' of method patents. As detailed in this chapter, divided performance is linked to Internet technologies and raises the possibility that patented inventions can be effectively performed without being infringed. Although no definite conclusions could be drawn on whether divided performance of method patents would give rise to infringement liability in Australia, the analysis still led to recommendations for law reform. To ensure patent law protects all classes of inventions, a recommendation was made that procured infringement should be codified in the *Patents Act*, with the specific intention that it create liability for divided performance.

Chapters 4 and 5 analysed specific issues relating to the operation of s 117(2)(b) of the *Patents Act*. Broadly, chapter 4 outlined problems with the provision that recent judicial decisions on second medical use patents have exposed. A central concern described was the ability of the provision to be used by patentees to foreclose markets that should be open to competition. Following this, chapter 5

analysed potential international-based solutions to these problems. Chapter 5 concluded by recommending that a 'carve out', as broadly recommended in the Australian *Pharmaceutical Patents Review*,<sup>1</sup> should be inserted into s 117(2)(b) to help balance the operation of the provision.

Chapter 6 examined the topic of innocent infringement. In light of a recent Australian case and recent US law reform, this chapter primarily focused on the role of marking products as patented to notify the public that patent rights protect a product. The analysis demonstrated that the likely operation of the law does not accord with its justifications. Thus, the chapter concluded by recommending that patent marking law should require that patent numbers be used, and that patent marking using appropriate websites should be permitted.

Chapter 7 explored the phenomenon of false patent marking. This topic has come to prominence due to recent litigation in the US. The analysis in this chapter showed that deficiencies in the operation of the Australian provision prohibiting false patent marking exist. However, it also argued that in the absence of significant issues with false patent marking in Australia, only minor legislative amendments are required to simplify and enhance the operation of the provision.

This thesis did not aim to conduct a comprehensive review of patent infringement law. But through analysing issues at the boundaries of the law, some comments can be made beyond the specific conclusions reached in each chapter.

Interestingly, at various stages of this thesis, it was not clear what the purpose and underlying theory of various provisions in the *Patents Act* were. This meant that to resolve whether the law was operating as it should, it was necessary to extend economic-based justifications for the patent system to the issue at hand. This was achieved, for example, in chapter 1 with regard to standing for partitioned exclusive licensees, and in chapter 6, it with regard to innocent infringement. This is noteworthy because, although economic justifications for patents have existed at least since the *Statute of Monopolies* nearly 400 years ago,<sup>2</sup> it demonstrates that how exactly these underpinning ideas apply to specific provisions is still being understood.

Overlapping with the previous observation, although there are parts of the *Patents Act* that are considered to be of such universal application that they are continually litigated (for example inventive step or patentable subject matter), there are many other provisions that are not regularly interacted with, but still have an important role to play in fulfilling the economic justifications for the patent system. Laws concerning innocent infringement and false patent marking are two such examples. Since, as explored in chapters 6 and 7, these laws play important roles in how patent law operates in a market economy, researchers should be mindful of this and be conscious that

<sup>1</sup> Australian Government, *Pharmaceutical Patents Review* (Canberra, May 2013) 138–40.

<sup>2</sup> *Statute of Monopolies* 1624, 21 Jac 1, c 3; see generally, Chris Dent, "'Generally Inconvenient': The 1624 *Statute of Monopolies* as Political Compromise" (2009) 33(2) *Melbourne University Law Review* 415.

provisions such as these require review from time to time. This will help ensure that the entire patent system is operating consistently with its underpinnings.

In light of the law reform advocated in this thesis, and the expected continual emergence of new technological and new legal issues in the future, there is little doubt that patent law should continue to be reviewed at regular intervals. However, reviews of the law, no matter how compelling, are largely futile without legislative action. The introduction to this thesis began with a reference to Professor Ricketson's paper on the past, present and future of intellectual property reform. One of Professor Ricketson's concerns was that intellectual property law-making at the executive level was not as efficient and efficacious as it should be. Whilst many of Professor Ricketson's recommendations have not been realised, there has been some activity in the Australian patent law reform context in the last 10 years.<sup>3</sup> As also noted in the introduction, this process will continue into the future with the recent announcement of a new review of Australia's intellectual property systems, which will be conducted by the Productivity Commission.<sup>4</sup> Coinciding with the scholarship in this thesis, this review is charged with ensuring that Australia's intellectual property laws sufficiently cater for new technology. It is also charged with comparing them to Australia's major trading partners' laws, and, overall, to recommend changes that may improve the 'wellbeing of Australian society'.<sup>5</sup> Thus, this reference has distinct capacity to continue to improve Australia's patent laws in a manner similar to that conducted in this thesis, except on a governmental level.

One of the most desirable outcomes from academic research is for it to contribute to law reform. Where appropriate, this thesis has attempted to fulfil this desire. Where technological or legal issues have posed controversies in Australian patent law that warrant change, an attempt has been made to articulate recommendations for reform consistent with underlying economic rationales. As noted throughout this thesis, the economic rationales for patents are open to debate. However, if the Productivity Commission's review of intellectual property systems in Australia comes to the conclusion that these rationales continue to be the main driving force behind patent law, then the recommendations for reform in this thesis are likely to be of utility and this thesis may inform that review.

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<sup>3</sup> See, eg, *Intellectual Property Laws Amendment Act 2006* (Cth); *Intellectual Property Amendment (Raising the Bar) Act 2012* (Cth).

<sup>4</sup> *Intellectual Property Arrangements* (18 August 2015) Productivity Commission  
<<http://www.pc.gov.au/inquiries/current/intellectual-property/terms-of-reference>>.

<sup>5</sup> *Ibid.*

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